Memphis District **Invitation for Bid No. DACW66-01-B-0001**

US Army Corps of Engineers®

Project Title:
DITCH NO. 1 & DITCH NO. 6 COUNTY BRIDGE AT MILE 4.03

Location:
PEMISCOT COUNTY, MISSOURI

Construction Solicitation and Specifications

THIS IS A TOTAL SMALL BUSINESS SET-ASIDE

Date: JANUARY 2001

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IMPORTANT - The "offer" section on the reverse must be fully completed by offeror.

4. CONTRACT NO.	5. REQUISITION/PURCHASE REQUEST NO.	6. PROJECT NO.
	W38XGR-1003-1155	DACW66-01-B-0001

7. ISSUED BY	CODE	8. ADDRESS OFFER TO
U S ARMY ENGINEER DISTRICT, MEMPHIS CONTRACTING DIVISION (CEMVM-CT) 167 NORTH MAIN STRET B202 MEMPHIS, TN 38103-1894	B1P0100	ADDRESS SAME AS BLOCK 7. HAND DELIVERED BIDS RECEIVED IN ROOM 681, CLIFFORD DAVIS FEDERAL BUILDING, 167 NORTH MAIN STREET, MEMPHIS, TN

9. FOR INFORMATION CALL: ▶	A. NAME	B. TELEPHONE NO. (Include area code) (NO COLLECT CALLS)
	ESTELLA C. BLACKMAN	(901) 544-0768

SOLICITATION

NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder".

10. THE GOVERNMENT REQUIRES PERFORMANCE OF THE WORK DESCRIBED IN THESE DOCUMENTS (Title, identifying no., date):

THE WORK REQUIRED IS FOR DITCH NO. 1 & DITCH NO. 6, COUNTY BRIDGE AT MILE 4.03, PEMISCOT COUNTY, MISSOURI, ST. FRANCIS BASIN PROJECT - CONSTRUCTION.

DESCRIPTION OF WORK:

THE WORK CONSIST OF FURNISHING ALL PLANT, LABOR, MATERIALS, AND EQUIPMENT FOR CLEARING AND DISPOSAL OF DEBRIS THEREFROM; DEMOLITION; EXCAVATION, BACKFILL AND DISPOSAL OF MATERIALS THEREFROM; STONE PROTECTION; CMP CULVERT REMOVAL AND INSTALLATION; CONSTRUCTION OF A PRESTRESSED, PRECAST CONCRETE BRIDGE, TURFING; AND ENVIRONMENTAL PROTECTION.

GENERAL WAGE DECISION NO. MO000001 IS LOCATED BEHIND SECTION 00010.

THE ESTIMATED VALUE OF THE PROPOSED WORK IS BETWEEN $250,000.00 AND $500,000.00.

THIS IS A TOTAL SMALL BUSINESS SET-ASIDE.

11. The Contractor shall begin performance within 10 calendar days and complete it within 175 calendar days after receiving

☐ award, ☒ notice to proceed. This performance period is ☒ mandatory, ☐ negotiable. (See Sec. 00800, Para. 1.1 .)

12A. THE CONTRACTOR MUST FURNISH ANY REQUIRED PERFORMANCE AND PAYMENT BONDS? (If "YES," indicate within how many calendar days after award in Item 12B.)	12B. CALENDAR DAYS
☒ YES ☐ NO	10

13. ADDITIONAL SOLICITATION REQUIREMENTS:

A. Sealed offers in original and 0 copies to perform the work required are due at the place specified in Item 8 by 02:30 (hour) local time 03/01/2001 (date). If this is a sealed bid solicitation, offers must be publicly opened at that time. Sealed envelopes containing offers shall be marked to show the offeror's name and address, the solicitation number, and the date and time offers are due.

B. An offer guarantee ☒ is, ☐ is not required.

C. All offers are subject to the (1) work requirements, and (2) other provisions and clauses incorporated in the solicitation in full text or by reference.

D. Offers providing less than 60 calendar days for Government acceptance after the date offers are due will not be considered and will be rejected.

14. NAME AND ADDRESS OF OFFEROR (Include ZIP Code)	15. TELEPHONE NO. (Include area code)
CAGE CODE: DUNS NO.	16. REMITTANCE ADDRESS (Include only if different than Item 14)
CODE FACILITY CODE	

17. The offeror agrees to perform the work required at the prices specified below in strict accordance with the terms of this solicitation, if this offer is accepted by the Government in writing within ____ calendar days after the date offers are due. (Insert any number equal to or greater than the minimum requirement stated in Item 13D. Failure to insert any number means the offeror accepts the minimum in Item 13D.)

AMOUNTS ▶	

18. The offeror agrees to furnish any required performance and payment bonds.

19. ACKNOWLEDGMENT OF AMENDMENTS

(The offeror acknowledges receipt of amendments to the solicitation - give number and date of each)

AMENDMENT NO.										
DATE										

20A. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print)	20B. SIGNATURE	20C. OFFER DATE

AWARD (To be completed by Government)

21. ITEMS ACCEPTED:

22. AMOUNT	23. ACCOUNTING AND APPROPRIATION DATA

24. SUBMIT INVOICES TO ADDRESS SHOWN IN (4 copies unless otherwise specified) ▶	ITEM	25. OTHER THAN FULL AND OPEN COMPETITION PURSUANT TO ☐ 10 U.S.C. 2304(c) ( ) ☐ 41 U.S.C. 253(c) ( )

26. ADMINISTERED BY CODE	27. PAYMENT WILL BE MADE BY

CONTRACTING OFFICER WILL COMPLETE ITEM 28 OR 29 AS APPLICABLE

☐ 28. NEGOTIATED AGREEMENT (contractor is required to sign this document and return _____ copies to issuing office.) Contractor agrees to furnish and deliver all items or perform all work, requisitions identified on this form and any continuation sheets for the consideration stated in this contract. The rights and obligations of the parties to this contract shall be governed by (a) this contract award, (b) the solicitation, and (c) the clauses, representations, certifications, and specifications incorporated by reference in or attached to this contract.	☐ 29. AWARD (Contractor is not required to sign this document.) Your offer on this solicitation, is hereby accepted as to the items listed. This award consummates the contract, which consists of (a) the Government solicitation and your offer, and (b) this contract award. No further contractual document is necessary.
30A. NAME AND TITLE OF CONTRACTOR OR PERSON AUTHORIZED TO SIGN (Type or print)	31A. NAME OF CONTRACTING OFFICER (Type or print)

30B. SIGNATURE	30C. DATE	31B. UNITED STATES OF AMERICA BY	31C. AWARD DATE

DITCH NO. 1 & 6
PEMISCOT COUNTY, MISSOURI
ST. FRANCIS BASIN PROJECT - CONSTRUCTION

SUPPLIES OR SERVICES AND PRICES/COSTS

County Bridge at Mile 4.03

ITEM	DESCRIPTION	QUANTITY	U/M	U/P	AMOUNT
0001	Clearing and Grubbing	1	LS	XXX.XX	$_____
0002	Excavation	1	LS	XXX.XX	$_____
0003	Roadway, Field Road and Field Access Ramp Embankments	1	LS	XXX.XX	$_____
0004	Aggregate Surfacing	1	LS	XXX.XX	$_____
0005	Finish Dressing, Fertilizing, Seeding, and Mulching	1	LS	XXX.XX	$_____
0006	Filter Material	320	TN	_____	$_____
0007	Riprap	580	TN	_____	$_____
0008	Grout for Rip Rap	1	LS	XXX.XX	$_____
0009	Concrete, Piling, Precast, Prestressed, 14-inch Square	980	LF	_____	$_____
0010	Cast-in-Place Structural Concrete	1	LS	XXX.XX	$_____
0011	Corrugated Metal Pipe, 24-inch	135	LF	_____	$_____
0012	Guardrail	1	LS	XXX.XX	$_____
0013	Environmental Protection	1	LS	XXX.XX	$_____
0014	Bridge at Mile 4.03	1	LS	XXX.XX	$_____

TOTAL FOR ITEMS 0001 THROUGH 0014 $_____

NOTE: Bidders shall furnish unit prices for all items listed on the schedule of bid items which require unit prices. If the bidder fails to insert a unit price in the appropriate blank for required items, but does furnish an extended total or an estimated amount for such items, the Government will deem his unit price to be the quotient obtained by dividing the extended amount for that line item by the quantity. IF THE BIDDER OMITS BOTH THE UNIT PRICE AND THE EXTENDED ESTIMATED AMOUNT FOR ANY ITEM, HIS BID WILL BE DECLARED NONRESPONSIVE.

Award will be made as a whole to one bidder.

All quantities are estimated where unit is given as "LS" or "EA".

If a bid or modification to a bid based on unit prices is submitted and provides for a lump sum adjustment to the total estimated cost, the application of the lump sum adjustment to each unit price, including lump sum units, in bid schedule must be stated, or, if it is not stated, the bidder agrees that the lump sum adjustment shall be applied on a pro rata basis to every unit price in the bid schedule.

Bidders are cautioned to read the contract clause entitled "Required Central Contractor Registration" located in Section 00700.

INVITATION: DACW66-01-B-0001

PLANT AND EQUIPMENT SCHEDULE

[TO BE ATTACHED TO BID FORM]

AVAILABLE PLANT TO BE USED

*_____

No.	TYPE	CAPACITY	MANUFACTURER	AGE & CONDTION	LOCATION
			*_____		
			*_____		

*PROVIDE SEPARATE TABLE FOR EACH TYPE OF EQUIPMENT SUCH AS CONCRETE PLANT, MATERIAL HANDLING, HAULING, ETC. USE ADDITIONAL PAGE IF NECESSARY.

ENG FORM 1619-R

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY FOR CONSTRUCTION. (FEB 1999)

a. The offeror's attention is called to the Equal Opportunity Clause and the Affirmative Action Compliance Requirements for Construction clause of this solicitation.

b. The goals for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Goals for minority participation for each trade		Goals for female participation for each trade
Non-SMSA Counties	11.4	6.9

These goals are applicable to all the Contractor's construction work performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, the Contractor shall apply the goals established for the geographical area where the work is actually performed. Goals are published periodically in the Federal Register in notice form, and these notices may be obtained from any Office of Federal Contract Compliance Programs office.

c. The Contractor's compliance with Executive Order 11246, as amended, and the regulations in 41 CFR 60-4 shall be based on (1) its implementation of the Equal Opportunity clause, (2) specific affirmative action obligations required by the clause entitled "Affirmative Action Compliance Requirements for Construction," and (3) its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade. The Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor, or from project to project, for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, Executive Order 11246, as amended, and the regulations in 41 CFR 60-4. Compliance with the goals will be measured against the total work hours performed.

d. The Contractor shall provide written notification to the Deputy Assistant Secretary for Federal Contract Compliance, U.S. Department of Labor, within 10 working days following award of any construction subcontract in excess of $10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the -

(1) Name, address and telephone number of the subcontractor;

(i) Employer identification number of the subcontractor:

(2) Estimated dollar amount of the subcontract;

(3) Estimated starting and completion dates of the subcontract; and

(4) Geographical area in which the subcontract is to be performed.

e. As used in this Notice, and in the contract resulting from this Solicitation, the “covered area” is Economic Area 107, St. Louis, MO, as follows:

Non-SMSA Counties.....11.4

IL Alexander, IL Bond; IL Calhoun, IL Clay, IL Effingham, IL Fayette;
IL Franklin; IL Greene, IL Jackson; IL Jasper; IL Jefferson, IL Jersey;
IL Johnson; IL Macoupin; IL Marion; IL Montgomery; IL Perry,
IL Pulaski; IL Randolph; IL Richland; IL Union; IL Washington;
IL Wayne; IL Williamson; MO Bollinger; MO Butler; MO Cape Girardeau;
MO Carter; MO Crawford; MO Dent; MO Gasconade; MO Iron;
MO Lincoln; MO Madison; MO Maries; MO Mississippi;
MO Montgomery; MO Perry; MO Phelps; MO Reynolds; MO Ripley;
MO St. Francis; MO Ste. Genevieve; MO Scott; MO Stoddard;
MO Warren; MO Washington; MO Wayne

(FAR 52.222-23)

General Decision Number MO000001

General Decision Number MO000001 Superseded General Decision No. MO990001
State: Missouri
Construction Type:
HEAVY
HIGHWAY
County(ies):
STATEWIDE
HEAVY AND HIGHWAY CONSTRUCTION PROJECTS

Modification Number	Publication Date
0	02/11/2000
1	05/12/2000
2	05/19/2000
3	06/02/2000
4	06/23/2000
5	07/28/2000
6	08/04/2000
7	09/01/2000
8	10/06/2000
9	11/13/2000

COUNTY(ies):
STATEWIDE

CARP0007M 04/01/1999

	Rates	Fringes
CASS (Richards-Gebauer AFB ONLY), CLAY, JACKSON, PLATTE AND RAY COUNTIES		
CARPENTERS & PILEDRIVERS	22.95	5.95

CARP0008C 05/01/1999

	Rates	Fringes
ST. LOUIS COUNTY AND CITY		
CARPENTERS	26.49	5.69

CARP0011A 05/01/2000

	Rates	Fringes
CARPENTERS & PILEDRIVERS:		
JEFFERSON AND ST. CHARLES COUNTIES	26.29	5.40
FRANKLIN COUNTY	23.78	5.40
WARREN COUNTY	23.78	5.40
LINCOLN COUNTY	23.39	5.40
PIKE, ST. FRANCOIS AND WASHINGTON COUNTIES	22.44	5.40
BUCHANAN, CASS, CLINTON, JOHNSON AND LAFAYETTE COUNTIES	21.88	5.76
ATCHISON, ANDREW, BATES, CALDWELL, CARROLL, DAVIESS, DEKALB, GENTRY, GRUNDY, HARRISON, HENRY, HOLT, LIVINGSTON, MERCER, NODAWAY, ST. CLAIR, SALINE AND WORTH COUNTIES	21.23	5.76
BARRY, BARTON, CAMDEN, CEDAR, CHRISTIAN, DADE, DALLAS, DOUGLAS, GREENE, HICKORY, JASPER, LACLEDE,		

LAWRENCE, MCDONALD, NEWTON, OZARK, POLK, STONE, TANEY, VERNON, WEBSTER AND WRIGHT COUNTIES	20.88	5.76
CRAWFORD, DENT, GASCONADE, IRON, MADISON, MARIES, MONTGOMERY, PHELPS, PULASKI, REYNOLDS, SHANNON, AND TEXAS COUNTIES	21.73	5.40
AUDRAIN (East of Hwy.19), RALLS, MARION, LEWIS, CLARK AND SCOTLAND COUNTIES	21.88	5.40
BOONE, COOPER, AND HOWARD COUNTIES	20.48	4.80
BENTON, MORGAN AND PETTIS COUNTIES	19.18	4.80
CALLAWAY, COLE, MILLER, MONITEAU, AND OSAGE COUNTIES	20.48	4.80
ADAIR, KNOX, PUTNAM, SCHUYLER, AND SULLIVAN COUNTIES	20.48	4.80
CHARITON, LINN, MACON, MONROE, RANDOLPH, AND SHELBY COUNTIES	20.48	4.80
BOLLINGER, BUTLER, CAPE GIRARDEAU, DUNKLIN, MISSISSIPPI, NEW MADRID, PEMISCOT, PERRY, STE. GENEVIEVE, SCOTT, STODDARD AND WAYNE COUNTIES	22.46	4.72
CARTER, HOWELL, OREGON AND RIPLEY COUNTIES	21.54	4.72

ELEC0001B 06/01/2000

	Rates	Fringes
BOLLINGER, BUTLER, CAPE GIRARDEAU, CARTER, DUNKLIN, FRANKLIN, IRON, JEFFERSON, LINCOLN, MADISON, MISSISSIPPI, NEW MADRID, PEMISCOT, PERRY,REYNOLDS, RIPLEY, ST. CHARLES, ST. FRANCOIS, ST. LOUIS (City and County), STE. GENEVIEVE, SCOTT, STODDARD, WARREN, WASHINGTON AND WAYNE COUNTIES		
ELECTRICIANS	26.65	14.21

ELEC0002D 09/03/2000

	Rates	Fringes
ADAIR, AUDRAIN, BOONE, CALLAWAY, CAMDEN, CARTER, CHARITON, CLARK, COLE, COOPER, CRAWFORD, DENT, FRANKLIN, GASCONADE, HOWARD, HOWELL, IRON, JEFFERSON, KNOX, LEWIS, LINCON, LINN, MACON, MARIES, MARION, MILLER, MONITEAU, MONROE, MONTGOMERY, MORGAN, OREGON, OSAGE, PERRY, PHELPS, PIKE, PULASKI, PUTNAM, RALLS, RANDOLPH, REYNOLDS, RIPLEY, ST. CHARLES, ST. FRANCOIS, ST. LOUIS (City and County), STE. GENEVIEVE, SCHUYLER, SCOTLAND, SHANNON, SHELBY, SULLIVAN, TEXAS, WARREN AND WASHINGTON COUNTIES.		
LINE CONSTRUCTION:		
Lineman & Cable Splicer	26.42	42% + 2.10
Groundman Equipment Operator	23.65	42% + 2.10
Groundman Winch Driver	19.44	42% + 2.10
Groundman, Groundman Driver	18.72	42% + 2.10

ELEC0053F 08/27/2000

	Rates	Fringes
BATES, BENTON, CARROLL, CASS, CLAY, HENRY, JACKSON, JOHNSON, LAFAYETTE, PETTIS, PLATTE, RAY, AND SALINE COUNTIES.		
LINE CONSTRUCTION:		

Lineman	27.80	9.99
Lineman Operator	25.97	9.46
Groundman Powderman	19.45	7.59
Groundman	18.49	7.31

ANDREW, ATCHINSON, BARRY, BARTON, BUCHANAN, CALDWELL, CEDAR, CHRISTIAN, CLINTON, DADE, DALLAS, DAVIESS, DE KALB, DOUGLAS, GENTRY, GREENE, GRUNDY, HARRISON, HICKORY, HOLT, JASPER, LACLEDE, LAWRENCE, LIVINGSTON, McDONALD, MERCER, NEWTON, NODAWAY, OZARK, POLK, ST. CLAIR, STONE, TANEY, VERNON, WEBSTER, WORTH, AND WRIGHT COUNTIES.

LINE CONSTRUCTION:		
Lineman	26.75	9.69
Lineman Operator	25.41	9.30
Groundman Powderman	18.69	7.37
Groundman	17.30	6.98

ELEC0095C 06/01/2000

	Rates	Fringes

BARRY, BARTON, CEDAR, CRAWFORD, DADE, JASPER, LAWRENCE, MCDONALD, NEWTON, ST CLAIR, AND VERNON COUNTIES

ELECTRICIANS:		
Electricians	19.51	5.60
Cable Splicers	19.86	5.60

ELEC0124I 08/30/1999

	Rates	Fringes

BATES, BENTON, CARROLL, CASS, CLAY, COOPER, HENRY, JACKSON, JOHNSON, LAFAYETTE, MORGAN, PETTIS, PLATTE, RAY AND SALINE COUNTIES:

ELECTRICIANS	25.34	10.73

ELEC0257C 03/01/1999

	Rates	Fringes

AUDRAIN (Except, Cuivre Township), BOONE, CALLAWAY, CAMDEN, CHARITON, COLE, CRAWFORD, DENT, GASCONADE, HOWARD, MARIES, MILLER, MONITEAU, OSAGE, PHELPS AND RANDOLPH COUNTIES:

Electricians	20.95	8.88
Cable Splicers	21.95	8.88

ELEC0350B 12/01/1999

	Rates	Fringes

ADAIR, AUDRAIN (East of Highway 19), CLARK, KNOX, LEWIS, LINN, MACON, MARION, MONROE, MONTGOMERY, PIKE, PUTNAM, RALLS, SCHUYLER, SCOTLAND, SHELBY AND SULLIVAN COUNTIES

ELECTRICIANS	23.22	7.27

ELEC0453D 09/01/2000

	Rates	Fringes

CHRISTIAN, DALLAS, DOUGLAS, GREENE, HICKORY, OREGON, OZARK, SHANNON, TEXAS, WEBSTER AND WRIGHT COUNTIES

ELECTRICIANS	20.60	4.37+10%

PULASKI COUNTY

ELECTRICIANS	21.64	4.37+10%

HOWELL, LACLEDE, POLK, STONE AND TANEY COUNTIES

ELECTRICIANS	14.20	3.97+10%

ELEC0545D 06/01/1998

	Rates	Fringes
ANDREW, BUCHANAN, CLINTON, DEKALB, ATCHISON, HOLT, MERCER, GENTRY, HARRISON, DAVIESS, GRUNDY, WORTH, LIVINGSTON, NODAWAY, AND CALDWELL COUNTIES		
ELECTRICANS	21.72	2.35+19.5%

ELEC0702D 09/04/1995

	Rates	Fringes
BOLLINGER, BUTLER, CAPE GIRARDEAU, DUNKLIN, MADISON, MISSISSIPPI, NEW MADRID, PEMISCOT, SCOTT, STODDARD AND WAYNE COUNTIES		
LINE CONSTRUCTION:		
Lineman	25.50	17%+2.00
Groundman Equipment Operator (all crawler type equipment D-4 and larger)	21.87	17%+2.00
Groundman - Class A	15.45	17%+2.00

ENGI0016A 05/01/2000

	Rates	Fringes
BARRY, BARTON, CAMDEN, CEDAR, CHRISTIAN, DADE, DALLAS, DOUGLAS, GREENE, JASPER, LAWRENCE, HICKORY, LACLEDE, MCDONALD, NEWTON, OZARK, POLK, ST. CLAIR, STONE, TANEY, VERNON, WEBSTER AND WRIGHT COUNTIES		
POWER EQUIPMENT OPERATORS		
GROUP 1	19.72	5.45
GROUP 2	19.37	5.45
GROUP 3	19.17	5.45
GROUP 4	17.12	5.45

POWER EQUIPMENT OPERATORS CLASSIFICATIONS
GROUP 1: Asphalt finishing machine & trench widening spreader; asphalt plant console operator; autograder; automatic slipform paver; backhoe; blade operator - all types; boat operator - tow; boilers-2; central mix concrete plant operator; clamshell operator; concrete mixer paver; crane operator; derrick or derrick trucks; ditching machine; dozer operator; dragline operator; dredge booster pump; dredge engineman; dredge operator; drill cat with compressor mounted on cat; drilling or boring machine rotary self-propelled; highloader; hoisting engine - 2 active drums; launch hammer wheel; locomotive operator; - standard guage; mechanic and welders; mucking machine; off-road trucks; piledriver operator; pitman crane operator; push cat operator; quad trac; scoop operator - all types; shovel operator; sideboom cats; skimmer scoop operators; trenching machine operator; truck crane.
GROUP 2: A-frame; asphalt hot-mix silo; asphalt plant fireman (drum or boiler); asphalt plant man; asphalt plant man; asphalt plant mixer operator; asphalt roller operator; backfiller operator; barber-greene loader; boat operator (bridges and dams); chip spreader; concrete mixer operator - skip loader; concrete plant operator; concrete pump operator; crusher operator; dredge oiler; elevating grader operator; fork lift; greaser-fleet; hoisting engine - 1; locomotive operator - narrow gauge; multiple compactor; pavement breaker; powerbroom - self-propelled; power shield; rooter; side discharge concrete spreader; slip form finishing machine; stumpcutter machine; throttle man; tractor operator (over 50 h.p.); winch truck.
GROUP 3: Boilers - 1; chip spreader (front man); churn drill

operator; clef plane operator; concrete saw operator (self-propelled); curb finishing machine; distributor operator; finishing machine operator; flex plane operator; float operator; form grader operator; pugmill operator; roller operator, other than high type asphalt; screening & washing plant operator; siphons & jets; sub-grading machine operator; spreader box operator, self-propelled (not asphalt); tank car heater operator (combination boiler & booster); tractor operator (50 h.p. or less); Ulmac, Ulric or similar spreader; vibrating machine operator, not hand;
GROUP 4: Grade checker; Oiler; Oiler-Driver
HOURLY PREMIUMS:
The following classifications shall receive $ .25 above GROUP 1 rate: Clamshells - 3 yds. or over; Cranes - Rigs or Piledrivers, 100 ft. of boom or over (including jib); Draglines - 3 yds. or over; Hoists - each additional active drum over 2 drums; Shovels - 3 yds. or over;
The following classifications shall receive $ .50 above GROUP 1 rate: Tandem scoop operator; Cranes - Rigs or Piledrivers, 150 ft. to 200 ft. of boom (including jib); Tandem scoop.
The following classifications shall receive $ .75 above GROUP 1 rate: Cranes - Rigs or Piledrivers, 200 ft. of boom or over (including jib.).

ENGI0101A 05/01/1999

	Rates	Fringes
BUCHANAN, CASS (Except that part of the geographic boundaries of the Richard-Gebaur Air Force Base), CLINTON AND LAFAYETTE COUNTIES		
POWER EQUIPMENT OPERATORS		
GROUP 1	20.20	7.15
GROUP 2	19.80	7.15
GROUP 3	17.80	7.15
ANDREW, ATCHISON, BATES, BENTON, CALDWELL, CARROLL, CHARITON, COOPER, DAVIESS, DEKALB, GENTRY, GRUNDY, HARRISON, HENRY, HOLT, HOWARD, JOHNSON, LINN, LIVINGSTON, MERCER, NODAWAY, PETTIS, SALINE, SULLIVAN AND WORTH COUNTIES		
POWER EQUIPMENT OPERATORS		
GROUP 1	20.20	7.15
GROUP 2	19.80	7.15
GROUP 3	17.80	7.15

POWER EQUIPMENT OPERATORS CLASSIFICATIONS
GROUP 1: Asphalt roller operator, finish; asphalt paver and spreader; asphalt plant operator; auto grader or trimmer or sub-grader; backhoe; blade operator (all types); boilers - 2; booster pump on dredge; bulldozer operator; boring machine (truck or crane mounted); clamshell operator; concrete mixer paver; concrete plant operator; concrete pump operator; crane operator; derrick or derrick trucks; ditching machine; dragline operator; dredge engineman; dredge operator; drill cat with compressor mounted (self-contained) or similar type self-propelled rotary drill (not air tract); drilling or boring machine (rotary-self-propelled); finishing machine operator; greaser; high loader-fork lift-skid loader (all types); hoisting engineer (2 active drums); locomotive operator (standard guage); mechanics and welders (field and plants); mucking machine operator; pile drive operator; pitman crane or

boom truck (all types); push cat; quad track; scraper operators (all types); shovel operator; sideboom cats; side discharge spreader; skimmer scoop operators; slip form paver operator (CMI, Rex, Gomeco or equal); la tourneau rooter (all tiller types); tow boat operator; truck crane; wood and log chippers (all types).
GROUP 2: A-frame truck operator; articulated dump truck; back filler operator; boilers (1); chip spreader; churn drill operator; compressor; concrete mixer operator, skip loader; concrete saws (self-propelled); conveyor operator; crusher operator; distributor operator; elevating grader operator; farm tractor (all attachments); fireman rig; float operator; form grade operator; hoisting engine (one drum); maintenance operator; multiple compactor; pavement breaker, self-propelled hydra-hammer (or similar type); paymill operator; power shield; pumps; roller operator (with or without blades); screening and washing plant; self-propelled street broom or sweeper; siphons and jets; straw blower; stump cutting machine; siphons and jets; tank car heater operator (combination boiler and booster); welding machine; vibrating machine operator (not hand held); welding machine.
GROUP 3: Oiler; oiler driver; mechanic.

HOURLY PREMIUMS:

THE FOLLOWING CLASSIFICATIONS SHALL RECEIVE ($ .25) ABOVE
GROUP 1 RATE: Dragline operator - 3 yds. & over; shovel 3 yds. & over; clamshell 3 yds. & over; Crane, rigs or piledrivers, 100’ of boom or over (incl. jib.), hoist - each additional active drum over 2 drums

THE FOLLOWING CLASSIFICATIONS SHALL RECEIVE ($ .50) ABOVE
GROUP 1 RATE: Tandem scoop operator; crane, rigs or piledrivers 150’ to 200’ of boom (incl. jib.)

THE FOLLOWING CLASSIFICATIONS SHALL RECEIVE ($ .75) ABOVE
GROUP 1 RATE: Crane rigs, or piledrivers 200 ft. of boom or over (including jib.)

ENGI0101E 04/01/2000

	Rates	Fringes
CASS (Richards-Gebaur Air Force Base ONLY), CLAY, JACKSON, PLATTE AND RAY COUNTIES		
POWER EQUIPMENT OPERATORS:		
GROUP 1	22.24	7.72
GROUP 2	21.20	7.72
GROUP 3	16.73	7.72
GROUP 4	20.08	7.72

POWER EQUIPMENT OPERATORS CLASSIFICATIONS
GROUP 1: Asphalt roller operator, finish; asphalt paver and spreader; asphalt plant operator; auto grader or trimmer or sub-grader; backhoe; blade operator (all types); boilers-2; booster pump on dredge; boring machine (truck or crane mounted); bulldozer operator; clamshell operator; concrete cleaning decontamination machine operator; concrete mixer paver; concrete plant operator; concrete pump operator; crane operator; derrick or derrick trucks; ditching machine; dragline operator; dredge engineman; dredge operator; drillcat with compressor mounted (self-contained) or similar type self propelled rotary drill (not air tract); drilling or boring machine (rotary - self-propelled); finishing machine operator; greaser; heavy equipment robotics operator/mechanic; horizontal directional drill operator; horizontal directional drill locator;

loader-forklift - skid loader (all types); hoisting engineer (2 active drums); locomotive operator (standard guage); master environmental maintenance mechanic; mechanics and welders (field and plants); mucking machine operator; piledrive operator; pitman crane or boom truck (all types); push cat; quad-track; scraper operators (all types); shovel operator; side discharge spreader; sideboom cats; skimmer scoop operator; slip-form paver (CMI, REX, Gomaco or equal); la tourneau rooter (all tiller types); tow boat operator; truck crane; ultra high perssure waterjet cutting tool system operator/mechanic; vacuum blasting machine operator/mechanic; wood and log chippers (all types)

GROUP 2: "A" Frame truck operator; articulated dump truck; back filler operator; boilers (1); chip spreader; churn drill operator; concrete mixer operator, skip loader; concrete saws (self-propelled); conveyor operator; crusher operator; distributor operator; elevating grader operator; farm tractor (all attachments); fireman rig; float operator; form grader operator; hoisting engine (1 drum); maintenance operator; multiple compactor; pavement breaker, self-propelled hydra-hammer (or similar type); power shield; paymill operator; pumps; siphons and jets; stump cutting machine; tank car heater operator (combination boiler and booster); compressor; roller operator (with or without blades); screening and washing plant; self-propelled street broom or sweeper; straw blower; tank car heater operator (combination boiler and booster); vibrating machine operator (not hand held)

GROUP 3: Oilers

GROUP 4: Oiler Driver (All Types)

FOOTNOTE:

HOURLY PREMIUMS

FOLLOWING CLASSIFICATIONS SHALL RECEIVE ($.25) ABOVE GROUP 1

RATE: Clamshells - 3 yd. capacity or over; Cranes or rigs, 80 ft. of boom or over (including jib); Draglines, 3 yd. capacity or over; Piledrivers 80 ft. of boom or over (including jib); Shovels & backhoes, 3 yd. capacity or over.

ENGI0513D 05/01/2000

	Rates	Fringes
FRANKLIN, JEFFERSON, LINCOLN, ST CHARLES, AND WARREN COUNTIES		
POWER EQUIPMENT OPERATORS:		
GROUP 1	23.92	10.71
GROUP 2	22.62	10.71
GROUP 3	19.62	10.71
GROUP 4	22.17	10.71

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Backhoe, Cable; Backhoe, Hydraulic (2 cu yds bucket and under regardless of attachment, one oiler for 2 or 3, two oilers for 4 through 6); Backhoe, Hydraulic over 2 cu yds; Cableway; Crane, Crawler or Truck; Crane, Hydraulic - Truck or Cruiser mounted, 16 tons and over; Crane, Locomotive; crane with boom including jib over 100 ft from pin to pin; Crane using rock socket tool; Derrick, Steam; Derrick Car and Derrick Boat; Dragline, 7 cu yds and over; Dredge; Gradall, Crawler or tire mounted; Locomotive, Gas, Steam & other powers; Pile Driver, Land or Floating; Scoop, Skimmer; Shovel, Power (Electric, Gas, Steam or other powers); Shovel, Power (7 cu yds and over); Switch Boat;

Whirley; Air Tugger with air compressor; Anchor Placing Barge; Asphalt Spreaker; Athey Force Feeder Loader, self-propelled; Backfilling Machine; Boat Operator - Push Boat or Tow Boat (job site); Boiler, High Pressure Breaking in Period; Boom Truck, Placing or Erecting; Boring Machine, Footing Foundation; Bullfloat; Cherry Picker; Combination Concrete Hoist and Mixer (such as Mixermobile); Compressor, Two 125 CFM and under; Compressor, Two through Four over 125 CFM; Compressor when operator runs throttle; Concrete Breaker (Truck or Tractor mounted); Concrete Pump (such as Pumpcrete machine); Concrete Saw (self-propelled); Concrete Spreader; Conveyor, Large (not selfpropelled) hoisting or moving brick and concrete into, or into and on floor level, one or both; Crane, Cimbing (such as Linden); Crane, Hydraulic - Rough Terrain, self-propelled; Crane, Hydraulic - Truck or Cruiser mounted - under 16 tons; Drilling machine - Self-powered, used for earth or rock drilling or boring (wagon drills and any hand drills obtaining power from other souces including concrete breakers, jackhammers and Barco equipmnet no engineer required); Elevating Grader; Engine Man, Dredge; Excavator or Powerbelt Machine; Finishing Machine, self-propelled oscillating screed; Forklift; Generators, Two through Six 30 KW or over; Grader, Road with power blade; Greaser; Highlift; Hoist, Concrete and Brick (Brick cages or concrete skips operating or on tower, Towermobile, or similar equipment); Hoist, Three or more drums in use; Hoist, Stack; Hydro-Hammer; Lad-A-Vator, hoisting brick or concrete; Loading Machine such as Barber-Greene; Mechanic on job site

GROUP 2: Air Tugger with plant air; Boiler (for power or heating shell of building or temporary enclosures in connection with construction work); Boiler, Temporary; Compressor, One over 125 CFM; Compressor, truck mounted; Conveyor, Large (not self-propelled); Conveyor, Large (not self- propelled) moving brick and concrete (distributing) on floor level; Curb Finishing Machine; Ditch Paving Machine; Elevator (outside); Endless Chain Hoist; Fireman (as required); Form Grader; Hoist, One Drum regardless of size (except brick or concrete); Lad-A-Vator, other hoisting; Manlift; Mixer, Asphalt, over 8 cu ft capacity; Mixer, one bag capacity or less; Mixer, without side loader, two bag capacity or more; Mixer, with side loader, regardless of size, not Paver; Mud Jack (where mud jack is used in conjenction with an air compressor, operator shall be paid $ .55 per hour in addition to his basic hourly rate for covering both operations); Pug Mill operator; Pump, Sump - self powered, automatic controlled over 2"; Scissor Lift (used for hoisting); Skid Steer Loader; Sweeper, Street; Tractor, small wheel type 50 HP and under with grader blade and similar equipment; Welding Machine, One over 400 amp; Winch, operating from truck

GROUP 3: Boat operator - outboard motor, job site; Conveyors (such as Con-Vay-It) regardless of how used; Elevator (inside); Heater operator, 2 through 6; Sweeper, Floor

GROUP 4: Crane type

HOURLY PREMIUMS:

Backhoe, Hydraulic 2 cu yds or less without oiler - $2.00; Certified Crane Operator - $1.50; Certified Hazardous Material Operator $1.50; Crane,climbing (such as Linden) - $.50; Crane, Pile Driving and Extracting - $ .50 Crane with boom (including job) over 100 ft from pin to pin - add $.01 per foot to maximum

of $4.00); Crane, using rock socket tool - $ .50; Derrick, diesel, gas or electric hoisting material and erecting steel (150 ft or more above ground) - $ .50; Dragline, 7 cu yds and over - $ .50; Hoist, Three or more drums in use - $ .50; Scoop, Tandem - $.50; Shovel, Power - 7 cu yds and over - $ .50; Tractor, Tandem Crawler - $ .50; Tunnel, man assigned to work in tunnel or tunnel shaft - $ .50; Wrecking, when machines are working on second floor or higher - $ .50

ENGI0513G 05/01/2000

	Rates	Fringes

ADAIR, AUDRAIN, BOLLINGER, BOONE, BUTLER, CALLAWAY, CAPE GIRARDEAU, CARTER, CLARK, COLE, CRAWFORD, DENT, DUNKLIN, GASCONADE, HOWELL, IRON, KNOX, LEWIS, MACON, MADISON, MARIES, MARION, MILLER, MISSISSIPPI, MONITEAU, MONROE, MONTGOMERY, MORGAN, NEW MADRID, OREGON, OSAGE, PEMISCOT, PERRY, PHELPS, PIKE, PULASKI, PUTNAM, RALLS, RANDOLPH, REYNOLDS, RIPLEY, ST. FRANCOIS, STE. GENEVIEVE, SCHUYLER, SCOTLAND, SCOTT, SHANNON, SHELBY, STODDARD, TEXAS, WASHINGTON, AND WAYNE COUNTIES

POWER EQUIPMENT OPERATORS		
GROUP 1	20.35	10.69
GROUP 2	20.00	10.69
GROUP 3	19.80	10.69
GROUP 4	16.15	10.69

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Asphalt finishing machine & trench widening spreader, asphalt plant console operator; autograder; automatic slipform paver; back hoe; blade operator - all types; boat operator tow; boiler two; central mix concrete plant operator; clam shell operator; concrete mixer paver; crane operator; derrick or derrick trucks; ditching machine; dozer operator; dragline operator; dredge booster pump; dredge engineman; dredge operator; drill cat with compressor mounted on cat; drilling or boring machine rotary self-propelled; highloader; hoisting engine 2 active drums; launchhammer wheel; locomotive operator standrad guage; mechanics and welders; mucking machine; piledriver operator; pitman crane operator; push cat operator; guad-trac; scoop operator; sideboom cats; skimmer scoop operator; trenching machine operator; truck crane, shovel operator.

GROUP 2: A-Frame; asphalt hot-mix silo; asphalt roller operator asphalt plant fireman (drum or boiler); asphalt plant man; asphalt plant mixer operator; backfiller operator; barber-greene loader; boat operator (bridge & dams); chip spreader; concrete mixer operator skip loader; concrete plant operator; concrete pump operator; dredge oiler; elevating graded operator; fork lift; grease fleet; hoisting engine one; locomotive operator narrow guage; multiple compactor; pavement breaker; powerbroom self-propelled; power shield; rooter; slip-form finishing machine; stumpcutter machine; side discharge concrete spreader; throttleman; tractor operator (over 50 hp); winch truck; asphalt roller operator; crusher operator.

GROUP 3: Spreader box operator, self-propelled not asphalt; tractor operator (50 h.p. or less); boilers one; chip spreader (front man); churn drill operator; compressor over 105 CFM 2-3 pumps 4" & over; 2-3 light plant 7.5 KWA or any combination thereof; clef plane operator; compressor maintenance operator 2 or 3; concrete saw operator (self-propelled); curb finishing

mancine; distributor operator; finishing machine operator; flex plane operator; float operator; form grader operator; pugmill operator; riller operator other than high type asphalt; screening & washing plant operator; siphons & jets; subgrading machine operator; tank car heater (combination boiler & booster); ulmac, ulric or similar spreader; vibrating machine operator; hydrobroom.
GROUP 4: Oiler; grout machine; oiler driver; compressor over 105 CFM one; conveyor operator one; maintenance operator; pump 4" & over one.
FOOTNOTE:
HOURLY PREMIUMS
Backhoe hydraulic, 2 cu. yds. or under without oiler - $2.00 Certified Crane Operator - $1.50; Certified Hazardous Material Operator $1.50; Crane, climbing (such as Linden) - $0.50; Crane, pile driving and extracting - $0.50; Crane, with boom (including jib) over 100’ from pin to pin add $0.01 per foot to maximum of $4.00; Crane, using rock socket tool - $0.50; Derrick, diesel, gas or electric, hoisting material and erecting steel (150’ or more above the ground) - $0.50; Dragline, 7 cu. yds, and over - $0.50; Hoist, three or more drums in use - $0.50; Scoop, Tandem - $0.50; Shovel, power - 7 cu. yds. or more - $0.50; Tractor, tandem crawler - $0.50; Tunnel, man assigned to work in tunnel or tunnel shaft - $0.50; Wrecking, when machine is working on second floor or higher - $0.50;

ENGI0513H 05/01/2000

	Rates	Fringes
ST. LOUIS CITY AND COUNTY		
POWER EQUIPMENT OPERATORS:		
GROUP 1	23.92	10.71
GROUP 2	23.92	10.71
GROUP 3	22.02	10.71
GROUP 4	19.02	10.71
GROUP 5	18.56	10.71

POWER EQUIPMENT OPERATORS CLASSIFICATIONS
GROUP 1: Backhoe, cable or hydraulic; cableway; crane, crawler or truck; crane, hydraulic-truck or cruiser mounted 16 tons & over; crane locomotive; derrick, steam; derrick car & derrick boat; dragline; dredge; gradall, crawler or tire mounted; locomotive, gas, steam & other powers; pile driver, land or floating; scoop, skimmer; shovel, power (steam, gas, electric, or other powers); switch boat; whirley.
GROUP 2: Air tugger w/air compressor; anchor-placing barge; asphalt spreader; athey force feeder loader (self-propelled); backfilling machine; backhoe-loader; boat operator-push boat or tow boat (job site); boiler, high pressure breaking in period; boom truck, placing or erecting; boring machine, footing foundation; bull-float; cherry picker; combination concrete hoist & mixer (such as mixer mobile); compressor (when operator runs throttle); concrete breaker (truck or tractor mounted); concrete pump, such as pump-crete machine; concrete saw (self-propelled), concrete spreader; conveyor, large (not self-propelled), hoisting or

moving brick and concrete into, or into and on floor level, one or both; crane, hydraulic-rough terrain, self-propelled; crane hydraulic-truck or cruiser mounted-under 16 tons; drilling machines, self-powered use for earth or rock drilling or boring (wagon drills and any hand drills obtaining power from other sources including concrete breakers, jackhammers and barco equipment-no engineer required); elevating grader; engineman, dredge; excavator or powerbelt machine; finishing machine, self-propelled oscillating screed; forklift; grader, road with power blade; highlift; greaser; hoist, stack, hydro-hammer; loading machine (such as barber-greene); machanic, on job site; mixer, pipe wrapping machines; plant asphalt; plant, concrete producing or ready-mix job site; plant heating-job site; plant mixing-job site; plant power, generating-job site; pumps, two through six self-powered over 2"; pumps, electric submersible, two through six, over 4"; quad-track; roller, asphalt, top or sub-grade; scoop, tractor drawn; spreader box; sub-grader; tie tamper; tractor-crawler, or wheel type with or without power unit, power take-offs and attachments regardless of size; trenching machine; tunnel boring machine; vibrating machine automatic, automatic propelled; welding machines (gasoline or diesel) two through six; well drilling machine

GROUP 3: Conveyor, large (not self-propelled); con-; veyor, large (not self-propelled) moving brick and concrete distributing) on floor level; mixer two or more mixers of one bag capacity or less; air tugger w/plant air; boiler, for power or heating on construction projects; boiler, temporary; compressor (mounted on truck; curb finishing machine; ditch paving machine; elevator; endless chain hoist; form grader; hoist, one drum regardless of size; lad-a-vator; manlift; mixer, asphalt, over 8 cu. ft. capacity, without side loader, 2 bag capacity or more; mixer, with side loader, regardless of size; pug mill operator; pump, sump-self-powered, automatic controlled over 2" during use in connection with construction work; sweeper, street; welding machine, one over 400 amp.; winch operating from truck; scissor lift (used for hoisting); tractor, small wheel type 50 h.p. & under with grader blade & similar equipment

GROUP 4: Boat operator-outboard motor (job site); conveyor (such as con-vay-it) regardless of how used; sweeper, floor

GROUP 5: Oiler on dredge and on truck crane.

HOURLY PREMIUMS:

Backhoe, hydraulic	
2 cu. yds. or under without oiler	$2.00
Certified Crane Operator	1.50
Certified Hazardous Material Operator	1.50
Crane, climbing (such as Linden)	.50
Crane, pile driving and extracting	.50
Crane, with boom (including jib) over 100’ (from pin to pin) add $.01 per foot to maximum of	4.00

Crane, using rock socket tool .50
Derrick, diesel, gas or electric, hoisting material and erecting steel (150’ or more above ground) .50
Dragline, 7 cu. yds. and over .50
Hoist, three (3) or more drums in use .50
Scoop, Tandem .50
Shovel, power - 7 cu. yds. or more .50
Tractor, tandem crawler .50
Tunnel, man assigned to work in tunnel or tunnel shaft .50
Wrecking, when machine is working on second floor or higher .50

IRON0010M 04/01/2000

	Rates	Fringes
BUCHANAN, CASS, CLAY, JACKSON, JOHNSON, LAFAYETTE, PLATTE AND RAY Counties		
IRONWORKERS	21.80	10.78
ANDREW, ATCHISON, BARTON, BATES, BENTON, CALDWELL, CAMDEN, CARROLL, CEDER CHARITON, CHRISTIAN, CLINTON, COOPER, DADE, DALLAS, DAVIESS, DE KALB, GENTRY, GREENE, GRUNDY, HARRISON, HENRY, HICKORY, HOLT, HOWARD, LACLEDE, LINN, LIVINGSTON, MERCER, MONITEAU, MORGAN, NODAWAY, PETTIS, POLK, PUTNAM, RANDOLPH, ST. CLAIR, SALINE, SULLIVAN, VERNON, WEBSTER, WRIGHT and WORTH Counties; and portions of ADAIR, BOONE, MACON, MILLER, and RANDOLPH Counties		
IRONWORKERS	18.80	10.78

IRON0321C 05/01/2000

	Rates	Fringes
DOUGLAS, HOWELL, OZARK AND TANEY COUNTIES		
IRONWORKERS	16.68	6.98

IRON0396D 08/02/2000

	Rates	Fringes
ST. LOUIS (City and County), ST. CHARLES, JEFFERSON, IRON, FRANKLIN, LINCOLN, WARREN, WASHINGTON, ST. FRANCOIS, STE. GENEVIEVE, and REYNOLDS Counties; and portions of MADISON, PERRY, BOLLINGER, WAYNE, and CARTER Counties		
IRONWORKERS	24.34	10.79

IRON0396I 08/01/2000

	Rates	Fringes
AUDRAIN, CALLAWAY, COLE, CRAWFORD, DENT, GASCONADE, MARIES, MONTGOMERY, OSAGE, PHELPS, PIKE, PULASKI, TEXAS, and WRIGHT Counties; and portions of CAMDEN, DOUGLAS, HOWELL, MILLER, OREGON, BOONE, SHANNON, LACLEDE, MONROE, and RALLS Counties		
IRONWORKERS	19.60	10.74

IRON0577F 06/01/2000

	Rates	Fringes
ADAIR, CLARK, KNOX, LEWIS, MACON, MARION, MONROE, RALLS, SCHUYLER, SCOTLAND, AND SHELBY COUNTIES		
IRONWORKERS	18.95	8.81

IRON0584E 06/01/2000

	Rates	Fringes
BARRY, JASPER, LAWRENCE, MCDONALD, NEWTON AND STONE Counties		
IRONWORKERS	17.50	7.57

IRON0782D 05/01/2000

	Rates	Fringes
CAPE GIRARDEAU, MISSISSIPPI, NEW MADRID, SCOTT, & STODDARD Counties; and portions of BOLLINGER, BUTLER, CARTER, DUNKLIN, MADISON, PEMISCOT, PERRY, RIPLEY, and WAYNE Counties		
IRONWORKERS:		
All Major River Work (Dams, Bridges): Projects $20 million or more	20.65	9.88
All Other Work	18.80	8.84

LABO0042C 03/06/2000

	Rates	Fringes
ST. LOUIS (City and County)		
LABORERS:		
Plumber Laborers	22.05	6.35

LABO0042H 03/01/2000

	Rates	Fringes
ST. LOUIS (City and County)		
LABORERS:		
Laborers, Flagperson	22.01	6.35
Wrecking	21.89	6.35
Dynamiter, Powderman	22.51	6.35

LABO0424B 05/01/2000

	Rates	Fringes
FRANKLIN COUNTY		
LABORERS		
GROUP 1	20.65	5.90
GROUP 2	21.25	5.90
JEFFERSON COUNTY		
LABORERS		
GROUP 1	20.70	5.90
GROUP 2	21.30	5.90
ADAIR, AUDRAIN, BOLLINGER, BOONE, BUTLER, CALLAWAY, CAPE GIRARDEAU, CARTER, CHARITON, CLARK, COLE, COOPER, CRAWFORD, DENT, DUNKLIN, GASCONADE, HOWARD, HOWELL, IRON, KNOX, LEWIS, LINN, MACON, MADISON, MARIES, MARION, MILLER, MISSISSIPPI, MONITEAU, MONROE, NEW MADRID, OREGON, OSAGE, PEMISCOT, PERRY, PHELPS, PIKE, PULASKI, PUTNAM, RALLS, RANDOLPH, REYNOLDS, RIPLEY, ST. FRANCOIS, STE. GENEVIEVE, SCHUYLER, SCOTLAND, SCOTT, SHANNON, SHELBY, STODDARD, SULLIVAN, TEXAS, WASHINGTON, AND WAYNE COUNTIES		
LABORERS		
GROUP 1	19.20	5.90
GROUP 2	19.80	5.90
LINCOLN, MONTGOMERY AND WARREN COUNTIES		
LABORERS		
GROUP 1	19.45	5.90
GROUP 2	20.05	5.90

LABORERS CLASSIFICATIONS

GROUP 1 - General laborer-flagman, carpenter tenders; salamander

Tenders; Dump Man; Ticket Takers; loading trucks under bins, hoppers, and conveyors; track man; cement handler; dump man on earth fill; georgie buggie man; material batch hopper man; spreader on asphalt machine; material mixer man (except on manholes); coffer dams; riprap pavers rock, block or brick; scaffolds over ten feet not self-supported from ground up; skip man on concrete paving; wire mesh setters on concrete paving; all work in connection with sewer, water, gas, gasoling, oil, drainage pipe, conduit pipe, tile and duct lines and all other pipe lines; power tool operator; all work in connection with hydraulic or general dredging operations; form setters, puddlers (paving only); straw blower nozzleman; asphalt plant platform man; chuck tender; crusher feeder; men handling creosote ties or creosote materials; men working with and handling epoxy material; topper of standing trees; feeder man on wood pulverizers, board and willow mat weavers and cabelee tiers on river work; deck hands; pile dike and revetment work; all laborers working on underground tunnels less than 25 ft. where compressed air is not used; abutement and pier hole men working six (6) ft. or more below ground; men working in coffer dams for bridge piers and footing in the river; barco tamper; jackson or any other similar tamp; cutting torch man; liners, curb, gutters, ditch lines; hot mastic kettlemen; hot tar applicator; hand blade operator; mortar men or brick or block manholes; rubbing concrete, air tool operator under 65 lbs.; caulker and lead man; chain or concrete saw under 15 h.p.; signal Gan; Guard rail and sign erectors.
GROUP 2 - Skilled laborers - Vibrator man; asphalt raker; head pipe layer on sewer work; batterboard man on pipe and ditch work; cliff scalers working from bosun’s chairs; scaffolds or platforms on dams or power plants over 10 ft. high; air tool operator over 65 lbs.; stringline man on concrete paving; sandblast man; laser beam man; wagon drill; churn drill; air track drill and all other similar type drills, gunite nozzle man; pressure grout man; screed man on asphalt; concrete saw 15 h.p. and over; grade checker; strigline man on electronic grade control; manhole builder; dynamite man; powder man; welder; tunnel man; waterblaster - 1000 psi or over; asbestos and/or hazardous waste removal and/or disposal

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LABO0579F 05/01/2000

	Rates	Fringes
BUCHANAN, CASS AND LAFAYETTE COUNTIES		
LABORERS		
GROUP 1	17.54	5.94
GROUP 2	17.89	5.94
ANDREW, ATCHISON, BARRY, BARTON, BATES, BENTON, CALDWELL, CAMDEN, CARROLL, CEDAR, CHRISTIAN, CLINTON, DADE, DALLAS, DAVIESS, DEKALB, DOUGLAS, GREENE, GENTRY, GRUNDY, HARRISON, HENRY, HICKORY, HOLT, JASPER, JOHNSON, LACLEDE, LAWRENCE, LIVINGSTON, MCDONALD, MERCER, MORGAN, NEWTON, NODAWAY, OZARK, PETTIS, POLK, ST. CLAIR, SALINE, STONE, TANEY, VERNON, WEBSTER, WORTH AND WRIGHT COUNTIES.		
LABORERS		
GROUP 1	16.24	5.69
GROUP 2	16.79	5.69

LABORERS CLASSIFICATIONS

GROUP 1: General Laborers - Carpenter tenders; salamander

tenders; loading trucks under bins; hoppers & conveyors; track men & all other general laborers; air tool operator; cement handler-bulk or sack; dump man on earth fill; georgie buggie man; material batch hopper man; material mixer man (except on manholes); coffer dams; riprap pavers - rock, block or brick; signal man; scaffolds over ten feet not self-supported from ground up; skipman on concrete paving; wire mesh setters on concrete paving; all work in connection with sewer, water, gas, gasoline, oil drainage pipe, conduit pipe, tile and duct lines and all other pipe lines; power tool operator, all work in connection with hydraulic or general dredging operations; puddlers (paving only); straw blower nozzleman; asphalt plant platform man; chuck tender; crusher feeder; men handling creosote ties or creosote materials; men working with and handling epoxy material or materials (where special protection is required); rubbing concrete; topper of standing trees; batter board man on pipe and ditch work; feeder man on wood pulverizers; board and willow mat weavers and cable tiers on river work; deck hands; pile dike and revetment work; all laborers working on underground tunnels less than 25 feet where compressed air is not used; abutment and pier hole men working six (6) feet or more below ground; men working in coffer dams for bridge piers and footings in the river; ditchliners; pressure groutmen; caulker; chain or concrete saw; cliffscalers working from scaffolds, bosuns' chairs or platforms on dams or power plants over (10) feet above ground; mortarmen on brick or block manholes; toxic and hazardous waste work.
GROUP 2: Skilled Laborers - Head pipe layer on sewer work; laser beam man; Jackson or any other similar tamp; cutting torch man; form setters; liners and stringline men on concrete paving, curb, gutters; hot mastic kettleman; hot tar applicator; sandblasting and gunite nozzlemen; air tool operator in tunnels; screed man on asphalt machine; asphalt raker; barco tamper; churn drills; air track drills and all similar drills; vibrator man; stringline man for electronic grade control; manhole builders-brick or block; dynamite and powder men; grade checker.

LABO0660H 03/06/2000

	Rates	Fringes
ST. CHARLES COUNTY		
LABORERS:		
GROUP 1	21.22	5.89
GROUP 2	21.22	5.89

LABORERS CLASSIFICATIONS

GROUP 1: General laborer; carpenter tender; salamander tender; dump man; ticket takers; flagman; loading trucks under bins, hoppers, and conveyors; track men; cement handler; dump man on earth fill; Georgie buggie man; material batch hopper man; spreader on asphalt machine; material mixer man (except on manholes); coffer dams; riprap paver - rock, block, or brick; signal man; scaffolds over 10 ft not self-supported from ground up; skipman on concrete paving; wire mech setters on concrete paving; all work in connection with sewer, water, gas, gasoline, oil, drainage pipe, conduit pipe, tile and duct lines and all other pipe lines; power tool operator; all work in connection with hydraulic or general dredging operations; form setters; puddlers (paving only); straw blower nozzleman;

asphalt plant platform man; chuck tender; crusher feeder; men handling creosote ties or creosote materials; men working with and handling epoxy material; topper of standing trees; feeder man on wood pulverizer; board and w llow mat weavers and cable tiers on river work; deck hands; pile dike and revetment work; all laborers working on underground tunnels less than 25 ft where compressed air is not used; abutment and pier hole men working 6 ft or more below ground; men working in coffer dams for bridge piers and footings in the river; Barco tamper, Jackson or any other similar tamp; cutting torch man; liners, curb, gutters, ditchliners; hot mastic kettleman; hot tar applicator; hand blade operators; mortar men on brick or block manholes; rubbing concrete; air tool operator under 65 pounds; caulker and lead man; chain saw under 15 hp; guard rail and sign erectors

GROUP 2: Vibrator man; asphalt raker; hand pipe layer on sewer work; batterboard man on pipe and ditch work; cliff scalers working from Bosun's chairs, scaffolds or platforms on dams or power plants over 10 ft high; air tool operator over 65 pounds; stringline man on concrete paving etc.; sand blast man; laser beam man; wagon drill; churn drill; air track drill and all other similar type drills; gunnite nozzle man; pressure grout man; screed man on asphalt; concrete saw 15 hp and over; grade checker; stringline man on electronic grade control; manhole builder; dynamite man; powder man; welder; tunnel man; waterblaster - 1000 psi and over; asbestos and/or hazardous waste removal and or disposal;

LABO0663D 04/01/2000

	Rates	Fringes
CASS (Richards-Gebaur Air Force Base ONLY) CLAY, JACKSON, PLATTE, AND RAY COUNTIES		
LABORERS:		
GROUP 1	19.96	6.29
GROUP 2	20.97	6.29

LABORERS CLASSIFICATIONS

GROUP 1: General laborers, Carpenter tenders, salamander tenders, loading trucks under bins, hoppers and conveyors, track men and all other general laborers, air tool operator, cement handler (bulk or sack), chain or concrete saw, deck hands, dump man on earth fill, Georgie Buggies man, material batch hopper man, scale man, material mixer man (except on manholes), coffer dams, abutments and pier hole men working below ground, riprap pavers rock, black or brick, signal man, scaffolds over ten feet not self-supported from ground up, skipman on concrete paving, wire mesh setters on concrete paving, all work in connection with sewer,water, gas, gasoling, oil, drainage pipe, conduit pipe, tile and duct lines and all other pipelines, power tool operator, all work in connection with hydraulic or general dredging operations, straw blower nozzleman,asphalt plant platform man, chuck tender, crusher feeder, men handling creosote ties on creosote materials, men working with and handling epoxy material or materials (where special protection is required), topper of standing trees, batter board man on pipe and ditch work, feeder man on wood pulverizers, board and willow mat weavers and cable tiers on river work, deck hands, pile dike and revetment work, all laborers working on underground tunnels less than 25 feet

where compressed air is not used, abutment and pier hole men working six (6) feet or more below ground, men working in coffer dams for bridge piers and footings in the river, ditchliners, pressure groutmen, caulker and chain or concrete saw, cliffscalers working from scaffolds, bosuns' chairs or platforms on dams or power plants over (10) feet above ground, mortarmen on brick or block manholes, signal man.
GROUP 2: Skilled Laborer - spreader or screed man on asphalt machine, asphalt raker, grade checker, vibrator man, concrete saw over 5 hp., laser beam man, barco tamper, jackson or any other similar tamp, wagon driller, churn drills, air track drills and other similar drills, cutting torch man, form setters, liners and stringline men on concrete paving, curb, gutters and etc., hot mastic kettleman, hot tar applicator, hand blade operators, mortar men on brick or block manholes, sand blasting and gunnite nozzle men, rubbing concrete, air tool operator in tunnels, head pipe layer on sewer work, manhole builder (brick or block), dynamite and powder men.

PAIN0002B 09/01/1996

	Rates	Fringes
CLARK, FRANKLIN, JEFFERSON, LEWIS, LINCOLN, MARION, PIKE, RALLS, ST. CHARLES, ST. LOUIS (CITY & COUNTY), AND WARREN COUNTIES		
PAINTERS:		
Brush	19.60	6.66
Spray	21.60	6.66

PAIN0003D 04/01/2000

	Rates	Fringes
BATES, BENTON, CALDWELL, CARROLL, CASS, CLAY, CLINTON, COOPER, DAVIESS, GRUNDY, HARRISON, HENRY, JACKSON, JOHNSON, LAFAYETTE, LIVINGSTON, MERCER, MONITEAU, MORGAN, PETTIS, PLATTE, RAY AND SALINE COUNTIES		
PAINTERS:		
Brush & Roller; Taper	22.10	7.01
Bazooka; Paperhanger	22.60	7.01
Storage Bin & Tanks (Roller or Brush); Elevated Tanks (Roller or Brush); Stageman; Beltman; Bridgeman; Steelman; Sand Blast (Base); Elevator Shaft	22.85	7.01
Lead Abatement; Sprayman	23.10	7.01
Sandblast (Bridge, Stage, Erected Steel and Storage Bin and Tanks)	23.60	7.01
Sprayman (Storage Bin & Tanks, Elevated Tanks); Stageman (Spray); Bridgeman (Spray); Steelman (Spray)	23.85	7.01
Steeplejack (other than Elevated Tanks)	26.79	7.01
Steeplejack -Spray or Sandblast (other than Elevated Tanks)	27.79	7.01

PAIN0098B 05/01/2000

	Rates	Fringes
ANDREW, ATCHISON, BUCHANAN, DE KALB, GENTRY, HOLT, NODAWAY & WORTH COUNTIES		

PAINTERS:

Brush & Roller	20.50	4.40
Sandblasters	21.50	4.40
Steeple Jack	23.50	4.40

PAIN0203B 04/01/1999

	Rates	Fringes

BARRY, BARTON, CEDAR, CHRISTIAN, DADE, DALLAS, DOUGLAS, GREENE, HICKORY, HOWELL, JASPER, LAWRENCE, MCDONALD, NEWTON, OZARK, POLK, ST. CLAIR, STONE, TANEY, VERNON, WEBSTER and WRIGHT COUNTIES

PAINTERS:

Sandblasters & Highman (over 40')	17.68	3.23
Painters	17.38	3.23
Tapers	16.47	3.21

PAIN1185C 04/16/1999

	Rates	Fringes

ADAIR, AUDRAIN, BOONE, CALLAWAY, CHARITON, COLE, GASCONADE, HOWARD, KNOX, LINN, MACON, MONROE, MONTGOMERY, OSAGE, PUTNAM, RANDOLPH, SCHUYLER, SCOTLAND, SHELBY AND SULLIVAN COUNTIES and the City of Booneville.

PAINTERS:

Brush, Roller, Paperhanger, Tapers	17.34	1.98
Tapers using Ames or comparable tools (bazooks, etc.)	17.59	1.98
Spray; Water Base Epoxy; Stage Under 50 ft.; Structural Steel (except for stairs and railings)	17.84	1.98
Sandblasting; Epoxy or Any Two Part Coating; Stage or Other Aerial Work Platforms Over 50 ft. high; Lead Abatement	18.34	1.98
Bridges, Dams, Locks or Powerhouses	19.34	1.98

PAIN1265C 07/01/1999

	Rates	Fringes

CAMDEN, CRAWFORD, DENT, LACLEDE, MARIES, MILLER, PHELPS, PULASKI AND TEXAS COUNTIES

PAINTERS:

Brush and Roller	16.51	6.61
Spray, Structural Steel, Sandblasting and all Tank Work	17.76	6.61
Lead Abatement	18.76	6.61

PAIN1292B 07/01/2000

	Rates	Fringes

BOLLINGER, BUTLER, CAPE GIRARDEAU, CARTER, DUNKLIN, MISSISSIPPI, NEW MADRID, OREGON, PEMISCOT, PERRY, REYNOLDS, RIPLEY, SCOTT, SHANNON, STODDARD and WAYNE COUNTIES

PAINTERS:

Commercial	15.20	5.51

Industrial	17.70	5.51
Bridges, Stacks & Tanks	22.65	5.51
Taper (Tools)	15.45	5.51
Spray & Abrasive Blasting	17.20	5.51
Waterblasting	17.20	5.51

Height Rates (All Areas): Over 60 ft. $0.50 per hour.
Under 60 ft. $0.25 per hour.

PAIN1292F 07/01/2000

	Rates	Fringes

IRON, MADISON, ST. FRANCOIS, STE. GENEVIEVE and WASHINGTON COUNTIES

PAINTERS:

Commercial	17.30	5.51
Industrial	18.30	5.51
Tapers (Tools)	17.55	5.51
Bridges, Stacks & Tanks	22.65	5.51
Spray & Abrasive Blasting	19.30	5.51
Waterblasting	19.30	5.51
Lead Abatement	18.05	5.51

Height Rates (All Areas): Over 60 ft. $0.50 per hour
Under 60 ft. $0.25 per hour.

PLAS0368C 04/01/1995

	Rates	Fringes

BENTON, CALLAWAY, CAMDEN, COLE, GASCONADE, HENRY, HICKORY, JOHNSON, MARIES, MILLER, MONTGOMERY, MORGAN, OSAGE, PETTIS, SALINE, & ST. CLAIR COUNTIES

CEMENT MASONS	17.56	1.00

PLAS0518G 04/01/2000

	Rates	Fringes

CASS (Richards-Gebaur AFB only), CLAY, JACKSON, PLATTE AND RAY COUNTIES

CEMENT MASONS	20.78	7.45

PLAS0518K 05/01/1998

	Rates	Fringes

ANDREW, ATCHISON, BUCHANAN, BATES, CALDWELL, CARROLL, CASS (Except Richards-Gebaur AFB) CLINTON, DAVIESS, DEKALB, GENTRY, GRUNDY, HARRISON, HOLT, JACKSON, LAFAYETTE, LIVINGSTON, MERCER, NODAWAY AND WORTH COUNTIES

CEMENT MASONS	19.95	5.23

PLAS0527A 05/01/2000

	Rates	Fringes

JEFFERSON, ST. CHARLES COUNTIES
AND ST. LOUIS (City and County)

CEMENT MASONS	23.48	8.72

FRANKLIN, LINCOLN, AND WARREN COUNTIES

CEMENT MASONS	22.31	8.72

PLAS0527D 06/01/2000

	Rates	Fringes

CRAWFORD, DENT, IRON, MADISON, MARION, PHELPS, PIKE, PULASKI, RALLS, REYNOLDS, ST. FRANCOIS, STE. GENEVIEVE, SHANNON, TEXAS, WASHINGTON COUNTIES

CEMENT MASONS 20.90 8.63

PLAS0908A 05/01/2000

Rates Fringes

BOLLINGER, BUTLER, CAPE GIRARDEAU, CARTER, DUNKLIN, MISSISSIPPI, NEW MADRID, OREGON, PEMISCOT, PERRY, RIPLEY, SCOTT, STODDARD, AND WAYNE COUNTIES

CEMENT MASONS 17.40 6.20

PLAS0908D 04/17/1995

Rates Fringes

BARRY, BARTON, CEDAR, CHRISTIAN, DADE, DALLAS, DOUGLAS, GREENE, HOWELL, JASPER, LACLEDE, LAWRENCE, MCDONALD, NEWTON, OZARK, POLK, STONE, TANEY, VERNON, WEBSTER, AND WRIGHT COUNTIES

CEMENT MASONS 14.60 .80

PLUM0008C 06/01/2000

Rates Fringes

CASS, CLAY, JACKSON, JOHNSON, PLATTE COUNTIES

PLUMBERS 26.44 9.87

BATES, BENTON, CARROLL, HENRY, LAFAYETTE, MORGAN, PETTIS, RAY, ST. CLAIR, SALINE, AND VERNON COUNTIES

PLUMBERS 24.00 9.87

PLUM0035C 01/01/2000

Rates Fringes

CAMDEN, COLE, CRAWFORD, FRANKLIN, JEFFERSON, MARIES, MILLER, MONITEAU, OSAGE, PHELPS, PULASKI, ST. CHARLES, ST. LOUIS (City and County), WARREN and WASHINGTON COUNTIES

PLUMBERS 26.105 9.74

PLUM0045D 09/01/2000

Rates Fringes

ANDREW, ATCHISON, BUCHANAN, CALDWELL, CLINTON, DAVIESS, DEKALB, GENTRY, HARRISON, HOLT, NODAWAY AND WORTH COUNTIES

PLUMBERS & PIPEFITTERS 25.00 8.90

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* PLUM0178D 11/01/2000

Rates Fringes

BARRY, CEDAR, CHRISTIAN, DADE, DALLAS, DOUGLAS, GREENE, HICKORY, LACLEDE, LAWRENCE, POLK, STONE, TANEY, WEBSTER, AND WRIGHT COUNTIES

PLUMBERS & PIPEFITTERS 21.10 7.37

PLUM0317B 07/01/1995

Rates Fringes

BOONE, CALLAWAY, COOPER, HOWARD, AND RANDOLPH COUNTY (Southern half)

PLUMBERS & PIPEFITTERS 19.18 3.17

PLUM0533E 06/01/2000

Rates Fringes

BATES, BENTON, CARROLL, CASS, CLAY, HENRY, HICKORY, JACKSON, JOHNSON, LAFAYETTE, MORGAN, PETTIS, PLATTE, RAY, SALINE, ST. CLAIR AND VERNON COUNTIES

PIPEFITTERS 27.38 10.28

PLUM0562D 06/01/1999

	Rates	Fringes
ADAIR, AUDRAIN, BOLLINGER, BUTLER, CAMDEN, CAPE GIRARDEAU, CARTER, CHARITON, CLARK, COLE, CRAWFORD, DENT, DUNKLIN, FRANKLIN, GASCONADE, GRUNDY, HOWELL, IRON, JEFFERSON, KNOX, LEWIS, LINCOLN, LINN, LIVINGSTON, MACON, MADISON, MARIES, MARION, MERCER, MILLER, MISSISSIPPI, MONITEAU, MONROE, MONTGOMERY, NEW MADRID, NORTHERN HALF OF RANDOLPH, OREGON, OSAGE, PEMISCOTT, PERRY, PHELPS, PIKE, PULASKI, PUTNAM, RALLS, REYNOLDS, RIPLEY, ST. CHARLES, ST. FRANCOIS, STE. GENEVIEVE, ST. LOUIS, SCHUYLER, SCOTLAND, SCOTT, SHANNON, SHELBY, STODDARD, SULLIVAN, TEXAS, WARREN, WASHINGTON, AND WAYNE COUNTIES.		
PIPEFITTERS	25.00	11.03

PLUM0658B 07/01/1998

	Rates	Fringes
BARTON, JASPER, MCDONALD, AND NEWTON COUNTIES		
PLUMBERS & PIPEFITTERS	16.73	5.33

TEAM0013H 05/01/1997

	Rates	Fringes
FRANKLIN, JEFFERSON, AND ST. CHARLES COUNTIES		
TRUCK DRIVERS:		
GROUP 1	26.04	
GROUP 2	26.15	
GROUP 3	26.19	
GROUP 4	26.26	
LINCOLN AND WARREN COUNTIES		
TRUCK DRIVERS:		
GROUP 1	24.69	
GROUP 2	24.80	
GROUP 3	24.84	
GROUP 4	24.91	
AUDRAIN, BOLLINGER, BOONE, CALLAWAY, CAPE GIRARDEAU, CARTER, COLE, CRAWFORD, DENT, GASCONADE, IRON, MACON, MADISON, MARIES, MARION, MILLER, MISSISSIPPI, MONROE, MONTGOMERY, NEW MADRID, OSAGE, PEMISCOT, PERRY, PHELPS, PIKE, PULASKI, RALLS, REYNOLDS, ST. FRANCOIS, STE. GENEVIEVE, SCOTT, SHANNON, SHELBY, STODDARD, TEXAS, WASHINGTON, AND WAYNE COUNTIES		
TRUCK DRIVERS:		
GROUP 1	18.57	4.40
GROUP 2	18.73	4.40
GROUP 3	18.72	4.40
GROUP 4	18.84	4.40
ADAIR, BUTLER, CLARK, DUNKIN, HOWELL, KNOX, LEWIS, OREGON, PUTNAM, RIPLEY, SCHUYLER, AND SCOTLAND COUNTIES		
TRUCK DRIVERS:		
GROUP 1	17.84	4.40
GROUP 2	18.00	4.40
GROUP 3	17.99	4.40
GROUP 4	18.11	4.40

TRUCK DRIVERS CLASSIFICATIONS:

GROUP 1: Flat Bed Trucks, Single Axle; Station Wagons; Pickup Trucks; Material Trucks, Single Axle; Tank Wagon, Single Axle

GROUP 2: Agitator and Transit Mix Trucks

GROUP 3: Flat Bed Trucks, Tandem Axle; Articulated Dump

Trucks; Material Trucks, Tandem Axle; Tank Wagon, Tandem Axle
GROUP 4: Semi and/or Pole Trailers; Winch, Fork & Steel Trucks; Distributor Drivers and Operators; Tank Wagon, Semi-Trailer; Insley Wagons, Dumpsters, Half-Tracks, Speedace, Euclids and other similar equipment; A-Frame and Derrick Trucks; Float or Low Boy

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TEAM0056A 05/01/2000

	Rates	Fringes
BUCHANAN, CASS (Except Richards-Gebaur AFB), JOHNSON, AND LAFAYETTE COUNTIES		
TRUCK DRIVERS:		
GROUP 1	21.63	5.25
GROUP 2	21.74	5.25
GROUP 3	21.78	5.25
GROUP 4	21.85	5.25
ANDREW, BARTON, BATES, BENTON, CALDWELL, CAMDEN, CARROLL, CEDAR, CHARITON, CHRISTIAN, CLINTON, COOPER, DADE, DALLAS, DAVIESS, DEKALB, DOUGLAS, GREENE, HENRY, HICKORY, HOWARD, JASPER, LACLEDE, LAWRENCE, LINN, LIVINGSTON, MONITEAU, MORGAN, NEWTON, PETTIS, POLK, RANDOLPH, ST CLAIR, SALINE, VERNON, WEBSTER, AND WRIGHT COUNTIES		
TRUCK DRIVERS:		
GROUP 1	20.42	5.25
GROUP 2	20.57	5.25
GROUP 3	20.58	5.25
GROUP 4	20.69	5.25
ATCHISON, BARRY, GENTRY, GRUNDY, HARRISON, HOLT, MCDONALD, MERCER, NODADWAY, OZARK, STONE, SULLIVAN, TANEY AND WORTH COUNTIES		
TRUCK DRIVERS:		
GROUP 1	19.69	5.25
GROUP 2	19.84	5.25
GROUP 3	19.85	5.25
GROUP 4	19.96	5.25

TRUCK DRIVER CLASSIFICATIONS
GROUP 1: Flat bed trucks single axle; station wagons; pickup trucks; material trucks single axle; tank wagons single axle.
GROUP 2: Agitator and transit mix-trucks.
GROUP 3: Flat bed trucks tandem axle; articulated dump trucks; material trucks tandem axle; tank wagons tandem axle.
GROUP 4: Semi and/or pole trailers; winch, fork & steel trucks; distributor drivers & operators; tank wagons semi-trailer; insley wagons, dumpsters, half-tracks, speedace, euclids & other similar equipment; A-frames and derrick trucks; float or low boy.

TEAM0245C 03/25/1998

	Rates	Fringes
BARRY, BARTON, CAMDEN, CEDAR, CHRISTIAN, DALLAS, DENT, DOUGLAS, GREENE, HICKORY, HOWELL, JASPER, LACLEDE, LAWRENCE, MCDONALD, MILLER, NEWTON, OZARK, PHELPS, POLK, PULASKI, SHANNON, STONE, TANEY, TEXAS, VERNON, WEBSTER AND WRIGHT COUNTIES		
TRUCK DRIVERS:		

Traffic Control Service Driver 12.90 3.56+a

PAID HOLIDAYS: New Year's Day, Decoration Day, July 4th, Labor Day, Thanksgiving Day, Christmas Day, Employee's birthday and 2 personal days.

TEAM0541A 04/01/2000

	Rates	Fringes
CASS (Richards-Gebaur AFB), CLAY, JACKSON, PLATTE, AND RAY COUNTIES		
TRUCK DRIVERS:		
GROUP 1	21.66	6.50
GROUP 2	21.17	6.50
GROUP 3	20.69	6.50

TRUCK DRIVERS CLASSIFICATIONS

GROUP 1: Mechanics and Welders, Field; A-Frame Low Boy-Boom Truck Driver.

GROUP 2: Articulated Dump Truck; Insley Wagons: Dump Trucks, Excavating, 5 cu yds and over; Dumpsters; Half-Tracks: Speedace: Euclids & similar excavating equipment. Material trucks, Tandem Two teams; Semi-Trailers; Winch trucks-Fork trucks; Distributor Drivers and Operators; Agitator and Transit Mix; Tank Wagon Drivers, Tandem or Semi; One Team; Station Wagons; Pickup Trucks; Material Trucks, Single Axle; Tank Wagon Drivers, Single Axle

GROUP 3: Oilers and Greasers - Field

TEAM0541C 03/25/1999

	Rates	Fringes
BATES, CASS, CLAY, HENRY, JACKSON, JOHNSON, LAFAYETTE, PLATTE, AND RAY COUNTIES		
TRUCK DRIVERS:		
Traffic Control Service Driver	13.65	2.44+a

a. PAID HOLIDAYS: New Year's Day, Decoration Day, July 4th, Labor Day, Thanksgiving Day, Christmas Day, Employee's birthday and 2 personal days.

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* TEAM0682D 05/01/2000

	Rates	Fringes
ST LOUIS CITY AND COUNTY		
TRUCK DRIVERS:		
GROUP 1	21.105	4.76+a+b
GROUP 2	21.305	4.78+a+b
GROUP 3	21.405	4.79+a+b

a. PENSION: $18.80 per day, $94.00 maximum per week.

b. HAZMAT PREMIUM: If Hazmat certification on a job site is required by a state or federal agency or requested by project owner or by the employer, employees on that job site shall receive $1.50 premium pay.

TRUCK DRIVERS CLASSIFICATIONS

GROUP 1 - Pick-up trucks; forklift, single axle; flatbed trucks; job site ambulance, and trucks or trailers of a water level capacity of 11.99 cu. yds. or less

GROUP 2 - Trucks or trailers of a water level capacity of 12.0 cu yds. up to 22.0 cu yds. including euclids, speedace and similar equipment of same capacity and compressors

GROUP 3 - Trucks or trailers of a water level capacity of 22.0

cu. yds & over including euclids, speedace & all floats, flatbed trailers, boom trucks, winch trucks, including small trailers, farm wagons tilt-top trailers, field offices, tool trailers, concrete pumps, concrete conveyors & gasoline tank trailers and truck mounted mobile concrete mixers

FOOTNOTE FOR TRUCK DRIVERS:

a. PAID HOLIDAYS: Christmas Day, Independence Day, Labor Day, Memorial Day, Veterans Day, New Years Day, Thanksgiving Day

PAID VACATION: 3 days paid vacation for 600 hours of service in any one contract year; 4 days paid vacation for 800 hours of service in any one contract year; 5 days paid vacation for 1,000 hours of services in any one contract years.

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(v)).

In the listing above, the "SU" designation means that rates listed under that identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator

U.S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U. S. Department of Labor
200 Constitution Avenue, N. W.
Washington, D. C. 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION

SECTION 00100
BIDDING SCHEDULE/INSTRUCTIONS TO BIDDERS
TABLE OF CONTENTS

SECTION 00100
BIDDING SCHEDULE/INSTRUCTIONS TO BIDDERS

CLAUSES INCORPORATED BY FULL TEXT

52.204-6 DATA UNIVERSAL NUMBERING SYSTEM (DUNS) NUMBER (JUN 99)

(a) Contractor identification is essential for complying with statutory contract reporting requirements. Therefore, the offeror is requested to enter, in the block with its name and address on the Standard Form 33 or similar document, the annotation "DUNS" followed by the DUNS number which identifies the offeror's name and address exactly as stated in the offer.

(b) If the offeror does not have a DUNS number, it should contact Dun and Bradstreet directly to obtain one. A DUNS number will be provided immediately by telephone at no charge to the offeror. For information on obtaining a DUNS number, the offeror, if located within the United States, should call Dun and Bradstreet at 1-800-333-0505. The offeror should be prepared to provide the following information:

(1) Company name.

(2) Company address.

(3) Company telephone number.

(4) Line of business.

(5) Chief executive officer/key manager.

(6) Date the company was started.

(7) Number of people employed by the company.

(8) Company affiliation.

(c) Offerors located outside the United States may obtain the location and phone number of the local Dun and Bradstreet Information Services office from the Internet Home Page at http://www.customerservice@dnb.com/. If an offeror is unable to locate a local service center, it may send an e-mail to Dun and Bradstreet at globalinfo@dnb.com.

(End of provision)

52.211-2 AVAILABILITY OF SPECIFICATIONS LISTED IN THE DOD INDEX OF SPECIFICATIONS AND STANDARDS (DODISS) AND DESCRIPTIONS LISTED IN THE ACQUISITION MANAGEMENT SYSTEMS AND DATA REQUIREMENTS CONTROL LIST, DOD 5010.12-L (DEC 1999)

Copies of specifications, standards, and data item descriptions cited in this solicitation may be obtained--

(a) From the ASSIST database via the Internet at http://assist.daps.mil; or

(b) By submitting a request to the--Department of Defense Single Stock Point (DoDSSP), Building 4, Section D, 700 Robbins Avenue, Philadelphia, PA 19111-5094, Telephone (215) 697-2667/2179, Facsimile (215) 697-1462.

(End of provision)

52.214-1 SOLICITATION DEFINITIONS--SEALED BIDDING (JUL 1987)

"Government" means United States Government.

"Offer" means "bid" in sealed bidding.

"Solicitation" means an invitation for bids in sealed bidding.

(End of provision)

52.214-3 AMENDMENTS TO INVITATIONS FOR BIDS (DEC 1989)

(a) If this solicitation is amended, then all terms and conditions which are not modified remain unchanged.

(b) Bidders shall acknowledge receipt of any amendment to this solicitation (1) by signing and returning the amendment, (2) by identifying the amendment number and date in the space provided for this purpose on the form for submitting a bid, (3) by letter or telegram, or (4) by facsimile, if facsimile bids are authorized in the solicitation. The Government must receive the acknowledgment by the time and at the place specified for receipt of bids.

(End of provision)

52.214-4 FALSE STATEMENTS IN BIDS (APR 1984)

Bidders must provide full, accurate, and complete information as required by this

solicitation and its attachments. The penalty for making false statements in bids is prescribed in 18 U.S.C. 1001.

(End of provision)

52.214-5 SUBMISSION OF BIDS (MAR 1997)

(a) Bids and bid modifications shall be submitted in sealed envelopes or packages (unless submitted by electronic means) (1) addressed to the office specified in the solicitation, and (2) showing the time and date specified for receipt, the solicitation number, and the name and address of the bidder.

(b) Bidders using commercial carrier services shall ensure that the bid is addressed and marked on the outermost envelope or wrapper as prescribed in subparagraphs (a)(1) and (2) of this provision when delivered to the office specified in the solicitation.

(c) Telegraphic bids will not be considered unless authorized by the solicitation; however, bids may be modified or withdrawn by written or telegraphic notice.

(d) Facsimile bids, modifications, or withdrawals, will not be considered unless authorized by the solicitation.

(e) Bids submitted by electronic commerce shall be considered only if the electronic commerce method was specifically stipulated or permitted by the solicitation.

52.214-6 EXPLANATION TO PROSPECTIVE BIDDERS (APR 1984)

Any prospective bidder desiring an explanation or interpretation of the solicitation, drawings, specifications, etc., must request it in writing soon enough to allow a reply to reach all prospective bidders before the submission of their bids. Oral explanations or instructions given before the award of a contract will not be binding. Any information given a prospective bidder concerning a solicitation will be furnished promptly to all other prospective bidders as an amendment to the solicitation, if that information is necessary in submitting bids or if the lack of it would be prejudicial to other prospective bidders.

(End of provision)

52.214-7 LATE SUBMISSIONS, MODIFICATIONS, AND WITHDRAWALS OF BIDS (NOV 1999)

(a) Bidders are responsible for submitting bids, and any modifications or withdrawals, so as to reach the Government office designated in the invitation for bids (IFB) by the time specified in the IFB. If no time is specified in the IFB, the time for receipt is 4:30 p.m., local time, for the designated Government office on the date that bids are due.

(b)(1) Any bid, modification, or withdrawal received at the Government office designated in the IFB after the exact time specified for receipt of bids is "late" and will not be considered unless it is received before award is made, the Contracting Officer determines that accepting the late bid would not unduly delay the acquisition; and--

(i) If it was transmitted through an electronic commerce method authorized by the IFB, it was received at the initial point of entry to the Government infrastructure not later than 5:00 p.m. one working day prior to the date specified for receipt of bids; or

(ii) There is acceptable evidence to establish that it was received at the Government installation designated for receipt of bids and was under the Government's control prior to the time set for receipt of bids.

(2) However, a late modification of an otherwise successful bid that makes its terms more favorable to the Government, will be considered at any time it is received and may be accepted.

(c) Acceptable evidence to establish the time of receipt at the Government installation includes the time/date stamp of that installation on the bid wrapper, other documentary evidence of receipt maintained by the installation, or oral testimony or statements of Government personnel.

(d) If an emergency or unanticipated event interrupts normal Government processes so that bids cannot be received at the Government office designated for receipt of bids by the exact time specified in the IFB and urgent Government requirements preclude amendment of the IFB, the time specified for receipt of bids will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which normal Government processes resume.

(e) Bids may be withdrawn by written notice received at any time before the exact time set for receipt of bids. If the IFB authorizes facsimile bids, bids may be withdrawn via facsimile received at any time before the exact time set for receipt of bids, subject to the conditions specified in the provision at 52.214-31, Facsimile Bids. A bid may be withdrawn in person by a bidder or its authorized representative if, before the exact time set for receipt of bids, the identity of the person requesting withdrawal is established and the person signs a receipt for the bid.

(End of provision)

52.214-18 PREPARATION OF BIDS--CONSTRUCTION (APR 1984)

(a) Bids must be (1) submitted on the forms furnished by the Government or on copies of those forms, and (2) manually signed. The person signing a bid must initial each erasure or change appearing on any bid form.

(b) The bid form may require bidders to submit bid prices for one or more items on various bases, including--

(1) Lump sum bidding;

(2) Alternate prices;

(3) Units of construction; or

(4) Any combination of subparagraphs (1) through (3) above.

(c) If the solicitation requires bidding on all items, failure to do so will disqualify the bid. If bidding on all items is not required, bidders should insert the words "no bid" in the space provided for any item on which no price is submitted.

(d) Alternate bids will not be considered unless this solicitation authorizes their submission.

52.214-19 CONTRACT AWARD--SEALED BIDDING--CONSTRUCTION (AUG 1996)

(a) The Government will evaluate bids in response to this solicitation without discussions and will award a contract to the responsible bidder whose bid, conforming to the solicitation, will be most advantageous to the Government, considering only price and the price-related factors specified elsewhere in the solicitation.

(b) The Government may reject any or all bids, and waive informalities or minor irregularities in bids received.

(c) The Government may accept any item or combination of items, unless doing so is precluded by a restrictive limitation in the solicitation or the bid.

(d) The Government may reject a bid as nonresponsive if the prices bid are materially unbalanced between line items or subline items. A bid is materially unbalanced when it is based on prices significantly less than cost for some work and prices which are significantly overstated in relation to cost for other work, and if there is a reasonable doubt that the bid will result in the lowest overall cost to the Government even though it may be the low evaluated bid, or if it is so unbalanced as to be tantamount to allowing an

advance payment.

52.214-34 SUBMISSION OF OFFERS IN THE ENGLISH LANGUAGE (APR 1991)

Offers submitted in response to this solicitation shall be in the English language. Offers received in other than English shall be rejected.

(End of provision)

52.214-35 SUBMISSION OF OFFERS IN U.S. CURRENCY (APR 1991)

Offers submitted in response to this solicitation shall be in terms of U.S. dollars. Offers received in other than U.S. dollars shall be rejected.

(End of provision)

52.216-1 TYPE OF CONTRACT (APR 1984)

The Government contemplates award of a firm, fixed-price contract resulting from this solicitation.

(End of clause)

52.225-10 NOTICE OF BUY AMERICAN ACT/BALANCE OF PAYMENTS PROGRAM REQUIREMENT--CONSTRUCTION MATERIALS (FEB 2000)

(a) Definitions. Construction material, domestic construction material, and foreign construction material, as used in this provision, are defined in the clause of this solicitation entitled “Buy American Act--Balance of Payments Program--Construction Materials” (Federal Acquisition Regulation (FAR) clause 52.225-9).

(b) Requests for determinations of inapplicability. An offeror requesting a determination regarding the inapplicability of the Buy American Act or Balance of Payments Program should submit the request to the Contracting Officer in time to allow a determination before submission of offers. The offeror shall include the information and applicable supporting data required by paragraphs (c) and (d) of the clause at FAR 52.225-9 in the request. If an offeror has not requested a determination regarding the inapplicability of

the Buy American Act or Balance of Payments Program before submitting its offer, or has not received a response to a previous request, the offeror shall include the information and supporting data in the offer.

(c) Evaluation of offers. (1) The Government will evaluate an offer requesting exception to the requirements of the Buy American Act or Balance of Payments Program, based on claimed unreasonable cost of domestic construction material, by adding to the offered price the appropriate percentage of the cost of such foreign construction material, as specified in paragraph (b)(3)(i) of the clause at FAR 52.225-9.

(2) If evaluation results in a tie between an offeror that requested the substitution of foreign construction material based on unreasonable cost and an offeror that did not request an exception, the Contracting Officer will award to the offeror that did not request an exception based on unreasonable cost.

(d) Alternate offers.

(1) When an offer includes foreign construction material not listed by the Government in this solicitation in paragraph (b)(2) of the clause at FAR 52.225-9, the offeror also may submit an alternate offer based on use of equivalent domestic construction material.

(2) If an alternate offer is submitted, the offeror shall submit a separate Standard Form 1442 for the alternate offer, and a separate price comparison table prepared in accordance with paragraphs (c) and (d) of the clause at FAR 52.225-9 for the offer that is based on the use of any foreign construction material for which the Government has not yet determined an exception applies.

(3) If the Government determines that a particular exception requested in accordance with paragraph (c) of the clause at FAR 52.225-9 does not apply, the Government will evaluate only those offers based on use of the equivalent domestic construction material, and the offeror shall be required to furnish such domestic construction material. An offer based on use of the foreign construction material for which an exception was requested--

(i) Will be rejected as nonresponsive if this acquisition is conducted by sealed bidding; or

(ii) May be accepted if revised during negotiations.

(End of provision)

52.232-33 PAYMENT BY ELECTRONIC FUNDS TRANSFER—CENTRAL CONTRACTOR REGISTRATION (MAY 1999)

(a) Method of payment. (1) All payments by the Government under this contract shall be made by electronic funds transfer (EFT), except as provided in paragraph (a)(2) of this

clause. As used in this clause, the term “EFT” refers to the funds transfer and may also include the payment information transfer.

(2) In the event the Government is unable to release one or more payments by EFT, the Contractor agrees to either--

(i) Accept payment by check or some other mutually agreeable method of payment; or

(ii) Request the Government to extend the payment due date until such time as the Government can make payment by EFT (but see paragraph (d) of this clause).

(b) Contractor's EFT information. The Government shall make payment to the Contractor using the EFT information contained in the Central Contractor Registration (CCR) database. In the event that the EFT information changes, the Contractor shall be responsible for providing the updated information to the CCR database.

(c) Mechanisms for EFT payment. The Government may make payment by EFT through either the Automated Clearing House (ACH) network, subject to the rules of the National Automated Clearing House Association, or the Fedwire Transfer System. The rules governing Federal payments through the ACH are contained in 31 CFR part 210.

(d) Suspension of payment. If the Contractor's EFT information in the CCR database is incorrect, then the Government need not make payment to the Contractor under this contract until correct EFT information is entered into the CCR database; and any invoice or contract financing request shall be deemed not to be a proper invoice for the purpose of prompt payment under this contract. The prompt payment terms of the contract regarding notice of an improper invoice and delays in accrual of interest penalties apply.

(e) Contractor EFT arrangements. If the Contractor has identified multiple payment receiving points (i.e., more than one remittance address and/or EFT information set) in the CCR database, and the Contractor has not notified the Government of the payment receiving point applicable to this contract, the Government shall make payment to the first payment receiving point (EFT information set or remittance address as applicable) listed in the CCR database.

(f) Liability for uncompleted or erroneous transfers. (1) If an uncompleted or erroneous transfer occurs because the Government used the Contractor's EFT information incorrectly, the Government remains responsible for--

(i) Making a correct payment;

(ii) Paying any prompt payment penalty due; and

(iii) Recovering any erroneously directed funds.

(2) If an uncompleted or erroneous transfer occurs because the Contractor's EFT information was incorrect, or was revised within 30 days of Government release of the EFT payment transaction instruction to the Federal Reserve System, and--

(i) If the funds are no longer under the control of the payment office, the Government is deemed to have made payment and the Contractor is responsible for recovery of any erroneously directed funds; or

(ii) If the funds remain under the control of the payment office, the Government shall not make payment, and the provisions of paragraph (d) of this clause shall apply.

(g) EFT and prompt payment. A payment shall be deemed to have been made in a timely manner in accordance with the prompt payment terms of this contract if, in the EFT payment transaction instruction released to the Federal Reserve System, the date specified for settlement of the payment is on or before the prompt payment due date, provided the specified payment date is a valid date under the rules of the Federal Reserve System.

(h) EFT and assignment of claims. If the Contractor assigns the proceeds of this contract as provided for in the assignment of claims terms of this contract, the Contractor shall require as a condition of any such assignment, that the assignee shall register in the CCR database and shall be paid by EFT in accordance with the terms of this clause. In all respects, the requirements of this clause shall apply to the assignee as if it were the Contractor. EFT information that shows the ultimate recipient of the transfer to be other than the Contractor, in the absence of a proper assignment of claims acceptable to the Government, is incorrect EFT information within the meaning of paragraph (d) of this clause.

(i) Liability for change of EFT information by financial agent. The Government is not liable for errors resulting from changes to EFT information made by the Contractor's financial agent.

(j) Payment information. The payment or disbursing office shall forward to the Contractor available payment information that is suitable for transmission as of the date of release of the EFT instruction to the Federal Reserve System. The Government may request the Contractor to designate a desired format and method(s) for delivery of payment information from a list of formats and methods the payment office is capable of executing. However, the Government does not guarantee that any particular format or method of delivery is available at any particular payment office and retains the latitude to use the format and delivery method most convenient to the Government. If the Government makes payment by check in accordance with paragraph (a) of this clause, the Government shall mail the payment information to the remittance address contained in the CCR database.

(End of Clause)

52.233-2 SERVICE OF PROTEST (AUG 1996)

(a) Protests, as defined in section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the General Accounting Office (GAO), shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from U.S. Army, Corps of Engineer, 167 N. Main Street, B202, Memphis, TN 38103-1894.

(b) The copy of any protest shall be received in the office designated above within one day of filing a protest with the GAO.

(End of provision)

52.252-1 SOLICITATION PROVISIONS INCORPORATED BY REFERENCE (FEB 1998)

This solicitation incorporates one or more solicitation provisions by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. The offeror is cautioned that the listed provisions may include blocks that must be completed by the offeror and submitted with its quotation or offer. In lieu of submitting the full text of those provisions, the offeror may identify the provision by paragraph identifier and provide the appropriate information with its quotation or offer. Also, the full text of a solicitation provision may be accessed electronically at this/these address(es):

http://www.arnet.gov/far
http://farsite.hill.af.mil
http://www.dtic.mil/dfars

252.204-7001 COMMERCIAL AND GOVERNMENT ENTITY (CAGE) CODE REPORTING (AUG 1999)

(a) The offeror is requested to enter its CAGE code on its offer in the block with its name and address. The CAGE code entered must be for that name and address. Enter “CAGE” before the number.

(b) If the offeror does not have a CAGE code, it may ask the Contracting Officer to request one from the Defense Logistics Information Service (DLIS). The Contracting Officer will--

(1) Ask the Contractor to complete section B of a DD Form 2051, Request for Assignment of a Commercial and Government Entity (CAGE) Code;

(2) Complete section A and forward the form to DLIS; and

(3) Notify the Contractor of its assigned CAGE code.

(c) Do not delay submission of the offer pending receipt of a CAGE code.

(End of provision)

52.0-4019 PREAWARD INFORMATION

Each bidder shall, upon request of the Contracting Officer, furnish a statement of whether he is now or ever has been engaged in any work similar to that covered by the specifications herein, the dollar value thereof, the year in which such work was performed, and the manner of its execution and giving such other information as will tend to show the bidder's ability to prosecute the required work. The "such other information" referred to above shall include but is not limited to the following:

(a) The name and address of the office or firm under which such similar work was performed.

(b) A list of key personnel available for the instant project and their qualifications.

(c) A copy of bidder's latest financial statement, including the names of banks or other financial institutions with which the bidder conducts business. If the financial statement is more than 60 days old, a certificate should be attached stating that financial condition is substantially the same, or if not the same, the changes that have taken place. Such statement will be treated as confidential.

(d) A list of present commitments, including the dollar value thereof, and name of office under which work is being performed.

52.0-4047 SITE OF THE WORK

Bidders are advised that for the purpose of applicability of the Davis-Bacon Act and other contract labor standards provisions, "the site of the work" under the contract to be awarded pursuant to the solicitation may not be limited to the physical place(s)

where the construction called for in the contract will remain when work on it has been completed. The "site of the work" may include other adjacent or nearby property used by the contractor or subcontractors during such construction. For example, fabrication plants, mobile factories, batch plants, borrow pits, job headquarters, tool yards, etc., will be considered part of the site of the work, provided they are dedicated exclusively or nearly so to performance on the contract and are located in proximity to the actual construction location that it would be reasonable to include them.

52.0-4048 QUANTITY ESTIMATES

Estimates of quantities involved in certain items of work for which bids are being solicited on a lump sum or job basis have been made for the use of the Government. Copies of these quantity estimates may be obtained from the U S Army Engineer District Memphis, 167 North Main Street, Room 762, Memphis, Tennessee 38103-1894, telephone 901/544-3236, or visit our website at http://www.mvm.usace.army.mil/ It is to be expressly understood that the accuracy of these estimates is in no way warranted and that the furnishing of this information to a bidder will not relieve him of his responsibility to estimate the quantities involved. It is further to be expressly understood that in no case will such estimate be used as a basis of claim against the Government.

52.0-4049 CONDITIONS AFFECTING THE WORK

Bidders should visit the site and take such other steps as may be reasonably necessary to ascertain the nature and location of the work, and the general and local conditions which can affect the work or the cost thereof. Failure to do so will not relieve bidders from responsibility for estimating properly the difficulty or cost of successfully performing the work. The Government will assume no responsibility for any understanding or representations concerning conditions made by any of its officers or agents prior to the execution of the contract, unless included in the Solicitation, the specifications, or related documents.

52.0-4055 NEGOTIATIONS AFTER SEALED BIDDING

(a) This clause applies if after bid opening the Contracting Officer determines that all otherwise acceptable bids received are at unreasonable prices, or only one bid is received and the Contracting Officer cannot determine the reasonableness of the bid price, or no responsive bid has been received from a responsible bidder; or the bids were not independently arrived at in open competition, were collusive, or were submitted in bad faith.

(b) The Government has the option to reject all bids received in response to the sealed bid advertisement and initiate negotiation. Negotiations will include soliciting offers from each responsible bidder that submits a bid in response to the solicitation.

(c) If after bid opening the Contracting Officer determines under (a) above that negotiations are in the best interest of the Government, the following steps will be followed:

(1) An amendment to the sealed bid advertisement will be issued to each responsible bidder changing the solicitation number to a request for proposal number. The amendment will also make any necessary changes to the scope of work.

(2) A cover letter signed by the negotiator will accompany the amendment explaining the procedures to be followed during negotiations.

(3) In the event there is only one responsible bidder under the initial sealed bid solicitation, cost or pricing data requirements set forth in FAR 15.804 will apply as will clause FAR 52.215-2, "Audit and Records - Negotiation".

52.0-4058 PROGRAM DATA

AUTHORITY: The work provided for herein is authorized by the Flood Control Act approved 15 JUN 1936, as amended.

52.0-4060 REVISION AND AMENDMENT TO SOLICITATION FOR BIDS

The right is reserved, as the interest of the Government may require, to revise or amend the specifications or drawings or both prior to the date set for opening bids. Such revisions and amendments, if any, will be announced by an amendment or amendments to this Solicitation for Bids. If revisions and amendments are of a nature which requires material changes in quantities or prices bid or both, the date set for opening bids may be postponed by such number of days as in the opinion of the issuing officer will enable bidders to revise their bids. In such cases, the amendment will include an announcement of new date for opening bids.

52.0-4078 (FAR 52.236-27) SITE VISIT (CONSTRUCTION) (ALTERNATE I) (FEB 1995)

(a) The clauses at 52.236-2, Differing Site Conditions, and 52.236-3, Site Investigations and Conditions Affecting the Work, will be included in any contract awarded as a result of this solicitation. Accordingly, bidders are urged and expected to inspect the site where the work will be performed.

(b) Two organized site visits have been scheduled for February 15, 2001 and February 22, 2001. (Insert Site Visit Dates)

(c) BIDDERS DESIRING A SITE VISIT SHALL CONTACT THE AREA ENGINEER AT LEAST ONE DAY PRIOR TO THE SCHEDULED SITE VISIT.

NAME: Stephen P. Shankle
Area Engineer

ADDRESS: Caruthersville Area Office
706 Harry S. Truman Boulevard
Caruthersville, Missouri 63830-1268

TELEPHONE: 901/544-3074 or 573/333-1043

COLLECT TELEPHONE CALLS WILL NOT BE ACCEPTED.

(End of Provision)

52.214-5000 APPARENT CLERICAL MISTAKES (MAR 1995)--EFARS

(a) For the purpose of initial evaluations of bids, the following will be utilized in the resolving arithmetic discrepancies found on the face of bidding schedule as submitted by the bidder:

(1) Obviously misplaced decimal points will be corrected;

(2) Discrepancy between unit price and extended price, the unit price will govern;

(3) Apparent errors in extension of unit prices will be corrected;

(4) Apparent errors in addition of lump-sum and extended prices will be corrected.

(b) For the purpose of bid evaluation, the government will proceed on the assumption that the bidder intends his bid to be evaluated on basis of the unit prices, the totals arrived at by resolution of arithmetic discrepancies as provided above and the bid will be so reflected on the abstract of bids.

(c) These correction procedures shall not be used to resolve any ambiguity concerning which bid is low.

(End of statement)

252.236-7008 CONTRACT PRICES - BIDDING SCHEDULES. (DEC 1991)

(a) The Government's payment for the items listed in the Bidding Schedule shall constitute full compensation to the Contractor for --

(1) Furnishing all plant, labor, equipment, appliances, and materials; and

(2) Performing all operations required to complete the work in conformity with the drawings and specifications.

(b) The Contractor shall include in the prices for the items listed in the Bidding Schedule all costs for work in the specifications, whether or not specifically listed in the Bidding Schedule.

END OF SECTION 00100

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REPRESENTATIONS & CERTIFICATIONS
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SECTION 00600
REPRESENTATIONS & CERTIFICATIONS

CLAUSES INCORPORATED BY FULL TEXT

52.203-2 CERTIFICATE OF INDEPENDENT PRICE DETERMINATION (APR 1985)

(a) The offeror certifies that --

(1) The prices in this offer have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other offeror or competitor relating to (i) those prices, (ii) the intention to submit an offer, or (iii) the methods of factors used to calculate the prices offered:

(2) The prices in this offer have not been and will not be knowingly disclosed by the offeror, directly or indirectly, to any other offeror or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a negotiated solicitation) unless otherwise required by law; and

(3) No attempt has been made or will be made by the offeror to induce any other concern to submit or not to submit an offer for the purpose of restricting competition.

(b) Each signature on the offer is considered to be a certification by the signatory that the signatory --

(1) Is the person in the offeror's organization responsible for determining the prices offered in this bid or proposal, and that the signatory has not participated and will not participate in any action contradictory to subparagraphs (a)(1) through (a)(3) above; or

(2) (i) Has been authorized, in writing, to act as an agent for the following principals in certifying that those principals have not participated, and will not participate in any action contrary to subparagraphs (a)(1) through (a)(3) above
_____ (insert full name of person(s) in the offeror's organization responsible for determining the prices offered in this bid or proposal, and the title of his or her position in the offeror's organization);

(ii) As an authorized agent, does certify that the principals named in subdivision (b)(2)(i) above have not participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above; and

(iii) As an agent, has not personally participated, and will not participate, in any action contrary to subparagraphs (a)(1) through (a)(3) above.

(c) If the offeror deletes or modifies subparagraph (a)(2) above, the offeror must furnish with its offer a signed statement setting forth in detail the circumstances of the disclosure.

(End of clause)

52.203-11 CERTIFICATION AND DISCLOSURE REGARDING PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS (APR 1991)

(a) The definitions and prohibitions contained in the clause, at FAR 52.203-12, Limitation on Payments to Influence Certain Federal Transactions, included in this solicitation, are hereby incorporated by reference in paragraph (b) of this Certification.

(b) The offeror, by signing its offer, hereby certifies to the best of his or her knowledge and belief that on or after December 23, 1989,--

(1) No Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a member of Congress on his or her behalf in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment or modification of any Federal contract, grant, loan, or cooperative agreement;

(2) If any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress or an employee of a Member of Congress on his or her behalf in connection with this solicitation, the offeror shall complete and submit, with its offer, OMB standard form LLL, Disclosure of Lobbying Activities, to the Contracting Officer; and

(3) He or she will include the language of this certification in all subcontract awards at any tier and require that all recipients of subcontract awards in excess of $100,000 shall certify and disclose accordingly.

(c) Submission of this certification and disclosure is a prerequisite for making or entering into this contract imposed by section 1352, title 31, United States Code. Any person who

makes an expenditure prohibited under this provision, shall be subject to a civil penalty of not less than $10,000, and not more than $100,000, for each such failure.

(End of provision)

52.204-3 TAXPAYER IDENTIFICATION (OCT 1998)

(a) Definitions.

Common parent, as used in this provision, means that corporate entity that owns or controls an affiliated group of corporations that files its Federal income tax returns on a consolidated basis, and of which the offeror is a member.

Taxpayer Identification Number (TIN), as used in this provision, means the number required by the Internal Revenue Service (IRS) to be used by the offeror in reporting income tax and other returns. The TIN may be either a Social Security Number or an Employer Identification Number.

(b) All offerors must submit the information required in paragraphs (d) through (f) of this provision to comply with debt collection requirements of 31 U.S.C. 7701(c) and 3325(d), reporting requirements of 26 U.S.C. 6041, 6041A, and 6050M, and implementing regulations issued by the IRS. If the resulting contract is subject to the payment reporting requirements described in Federal Acquisition Regulation (FAR) 4.904, the failure or refusal by the offeror to furnish the information may result in a 31 percent reduction of payments otherwise due under the contract.

(c) The TIN may be used by the Government to collect and report on any delinquent amounts arising out of the offeror's relationship with the Government (31 U.S.C. 7701(c)(3)). If the resulting contract is subject to the payment reporting requirements described in FAR 4.904, the TIN provided hereunder may be matched with IRS records to verify the accuracy of the offeror's TIN.

(d) Taxpayer Identification Number (TIN).

___ TIN:.----------

___ TIN has been applied for.

___ TIN is not required because:

___ Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the United States and does not have an office or place of business or a fiscal paying agent in the United States;

___ Offeror is an agency or instrumentality of a foreign government;

___ Offeror is an agency or instrumentality of the Federal Government.

(e) Type of organization.

___ Sole proprietorship;

___ Partnership;

___ Corporate entity (not tax-exempt);

___ Corporate entity (tax-exempt);

___ Government entity (Federal, State, or local);

___ Foreign government;

___ International organization per 26 CFR 1.6049-4;

___ Other----------

(f) Common parent.

___ Offeror is not owned or controlled by a common parent as defined in paragraph (a) of this provision.

___ Name and TIN of common parent:

Name----------

TIN----------

(End of provision)

52.209-5 CERTIFICATION REGARDING DEBARMENT, SUSPENSION, PROPOSED DEBARMENT, AND OTHER RESPONSIBILITY MATTERS (JAN 2001)

(a)(1) The Offeror certifies, to the best of its knowledge and belief, that--

(i) The Offeror and/or any of its Principals--

(A) Are [ ] are not [ ] presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency;

(B) Have [ ] have not [ ], within the three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state, or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property;

(C) Are [ ] are not [ ] presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in subdivision (a)(1)(i)(B) of this provision; and

(ii)(A) The offeror, aside from the offenses enumerated in paragraphs (a)(1)(i)(A), (B), and (C) of this provision, has [ ] has not [ ] within the past three years, relative to tax, labor and employment, environmental, antitrust, or consumer protection laws--

(1) Been convicted of a Federal or state felony (or has any Federal or state felony indictments currently pending against them); or

(2) Had a Federal court judgment in a civil case brought by the United States rendered against them; or

(3) Had an adverse decision by a Federal administrative law judge, board, or commission indicating a willful violation of law.

(B) If the offeror has responded affirmatively, the offeror shall provide additional information if requested by the Contracting Officer; and

(iii) The Offeror has [ ] has not [ ], within a three-year period preceding this offer, had one or more contracts terminated for default by any Federal agency.

(2) "Principals," for the purposes of this certification, means officers; directors; owners; partners; and, persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).

THIS CERTIFICATION CONCERNS A MATTER WITHIN THE JURISDICTION OF AN AGENCY OF THE UNITED STATES AND THE MAKING OF A FALSE, FICTITIOUS, OR FRAUDULENT CERTIFICATION MAY RENDER THE MAKER SUBJECT TO PROSECUTION UNDER SECTION 1001, TITLE 18, UNITED STATES CODE.

(b) The Offeror shall provide immediate written notice to the Contracting Officer if, at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

(c) A certification that any of the items in paragraph (a) of this provision exists will not necessarily result in withholding of an award under this solicitation. However, the certification will be considered in connection with a determination of the Offeror's responsibility. Failure of the Offeror to furnish a certification or provide such additional information as requested by the Contracting Officer may render the Offeror nonresponsible.

(d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of an Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

(e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly rendered an erroneous certification, in addition to other remedies available to the Government, the Contracting Officer may terminate the contract resulting from this solicitation for default.

(End of provision)

52.219-1 SMALL BUSINESS PROGRAM REPRESENTATIONS (OCT 2000) ALTERNATE I (OCT 2000) & ALTERNATE II (OCT 2000)

(a)(1) The North American Industry Classification System (NAICS) code for this acquisition is 234120.

(2) The small business size standard is 1622.

(3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.

(b) Representations. (1) The offeror represents as part of its offer that it ( ) is, ( ) is not a small business concern.

(2) (Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.) The offeror represents, for general statistical purposes, that it ( ) is, ( ) is not a small disadvantaged business concern as defined in 13 CFR 124.1002.

(3) (Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.) The offeror represents as part of its offer that it ( ) is, ( ) is not a women-owned small business concern.

(4) (Complete only if the offeror represented itself as a small business concern in paragraph (b)(1) of this provision.) The offeror represents as part of its offer that it ( ) is, ( ) is not a veteran-owned small business concern.

(5) (Complete only if the offeror represented itself as a veteran-owned small business concern in paragraph (b)(4) of this provision.) The offeror represents as part of its offer that it ( ) is, ( ) is not a service-disabled veteran-owned small business concern.

(6) (Complete only if offeror represented itself as small business concern in paragraph (b)(1) of this provision). The offeror represents, as part of its offer, that--

(i) It ( ) is, ( ) is not a HUBZone small business concern listed, on the date of this representation, on the List of Qualified HUBZone Small Business Concerns maintained by the Small Business Administration, and no material change in ownership and control, principal office, or HUBZone employee percentage has occurred since it was certified by the Small Business Administration in accordance with 13 CFR Part 126; and

(ii) It ( ) is, ( ) is not a joint venture that complies with the requirements of 13 CFR Part 126, and the representation in paragraph (b)(6)(i) of this provision is accurate for the HUBZone small business concern or concerns that are participating in the joint venture. (The offeror shall enter the name or names of the HUBZone small business concern or concerns that are participating in the joint venture: _____.) Each HUBZone small business concern participating in the joint venture shall submit a separate signed copy of the HUBZone representation.

(7) (Complete if offeror represented itself as disadvantaged in paragraph (b)(2) of this provision.) The offeror shall check the category in which its ownership falls:

( ) Black American.

( ) Hispanic American.

( ) Native American (American Indians, Eskimos, Aleuts, or Native Hawaiians).

( ) Asian-Pacific American (persons with origins from Burma, Thailand, Malaysia, Indonesia, Singapore, Brunei, Japan, China, Taiwan, Laos, Cambodia (Kampuchea), Vietnam, Korea, The Philippines, U.S. Trust Territory of the Pacific Islands (Republic of Palau), Republic of the Marshall Islands, Federated States of Micronesia, the Commonwealth of the Northern Mariana Islands, Guam, Samoa, Macao, Hong Kong, Fiji, Tonga, Kiribati, Tuvalu, or Nauru).

( ) Subcontinent Asian (Asian-Indian) American (persons with origins from India, Pakistan, Bangladesh, Sri Lanka, Bhutan, the Maldives Islands, or Nepal).

(c) Definitions. As used in this provision--

Service-disabled veteran-owned small business concern--

(1) Means a small business concern--

(i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and

(ii) The management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.

(2) Service-disabled veteran means a veteran, as defined in 38 U.S.C. 101(2), with a disability that is service-connected, as defined in 38 U.S.C. 101(16).

"Small business concern," means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR Part 121 and the size standard in paragraph (a) of this provision.

Veteran-owned small business concern means a small business concern--

(1) Not less than 51 percent of which is owned by one or more veterans (as defined at 38 U.S.C. 101(2)) or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; and

(2) The management and daily business operations of which are controlled by one or more veterans.

"Women-owned small business concern," means a small business concern --

(1) Which is at least 51 percent owned by one or more women or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and

(2) Whose management and daily business operations are controlled by one or more women.

(d) Notice.

(1) If this solicitation is for supplies and has been set aside, in whole or in part, for small business concerns, then the clause in this solicitation providing notice of the set-aside contains restrictions on the source of the end items to be furnished.

(2) Under 15 U.S.C. 645(d), any person who misrepresents a firm's status as a small, HUBZone small, small disadvantaged, or women-owned small business concern in order to obtain a contract to be awarded under the preference programs established pursuant to section 8(a), 8(d), 9, or 15 of the Small Business Act or any other provision of Federal law that specifically references section 8(d) for a definition of program eligibility, shall--

(i) Be punished by imposition of fine, imprisonment, or both;

(ii) Be subject to administrative remedies, including suspension and debarment; and

(iii) Be ineligible for participation in programs conducted under the authority of the Act.

(End of provision)

52.219-2 EQUAL LOW BIDS. (OCT 1995)

(a) This provision applies to small business concerns only.

(b) The bidder's status as a labor surplus area (LSA) concern may affect entitlement to award in case of tie bids. If the bidder wishes to be considered for this priority, the bidder must identify, in the following space, the LSA in which the costs to be incurred on account of manufacturing or production (by the bidder or the first-tier subcontractors) amount to more than 50 percent of the contract price.

_____
_____
_____
_____

(c) Failure to identify the labor surplus area as specified in paragraph (b) of this provision will preclude the bidder from receiving priority consideration. If the bidder is awarded a contract as a result of receiving priority consideration under this provision and would not have otherwise received award, the bidder shall perform the contract or cause the contract to be performed in accordance with the obligations of an LSA concern.

52.219-19 SMALL BUSINESS CONCERN REPRESENTATION FOR THE SMALL BUSINESS COMPETITIVENESS DEMONSTRATION PROGRAM (OCT 2000)

(a) Definition.

"Emerging small business" as used in this solicitation, means a small business concern whose size is no greater than 50 percent of the numerical size standard applicable to the North American Industry Classification System (NAICS) code assigned to a contracting opportunity.

(b) [Complete only if the Offeror has represented itself under the provision at 52.219-1 as a small business concern under the size standards of this solicitation.] The Offeror [ ] is, [ ] is not an emerging small business.

(c) (Complete only if the Offeror is a small business or an emerging small business, indicating its size range.)

Offeror's number of employees for the past 12 months (check this column if size standard stated in solicitation is expressed in terms of number of employees) or Offeror's average annual gross revenue for the last 3 fiscal years (check this column if size standard stated in solicitation is expressed in terms of annual receipts). (Check one of the following.)

No. of Employees	Avg. Annual Gross Revenues
____ 50 or fewer	____ $1 million or less
____ 51 - 100	____ $1,000,001 - $2 million
____ 101 - 250	____ $2,000,001 - $3.5 million
____ 251 - 500	____ $3,500,001 - $5 million
____ 501 - 750	____ $5,000,001 - $10 million
____ 751 - 1,000	____ $10,000,001 - $17 million
____ Over 1,000	____ Over $17 million

(End of provision)

52.222-22 PREVIOUS CONTRACTS AND COMPLIANCE REPORTS (FEB 1999)

The offeror represents that --

(a) [ ] It has, [ ] has not participated in a previous contract or subcontract subject to the Equal Opportunity clause of this solicitation;

(b) [ ] It has, [ ] has not, filed all required compliance reports; and

(c) Representations indicating submission of required compliance reports, signed by proposed subcontractors, will be obtained before subcontract awards.

(End of provision)

52.223-13 CERTIFICATION OF TOXIC CHEMICAL RELEASE REPORTING (OCT 2000)

(a) Submission of this certification is a prerequisite for making or entering into this contract imposed by Executive Order 12969, August 8, 1995.

(b) By signing this offer, the offeror certifies that--

(1) As the owner or operator of facilities that will be used in the performance of this contract that are subject to the filing and reporting requirements described in section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 U.S.C. 11023) and section 6607 of the Pollution Prevention Act of 1990 (PPA) (42 U.S.C. 13106), the offeror will file and continue to file for such facilities for the life of the contract the Toxic Chemical Release Inventory Form (Form R) as described in sections 313(a) and (g) of EPCRA and section 6607 of PPA; or

(2) None of its owned or operated facilities to be used in the performance of this contract is subject to the Form R filing and reporting requirements because each such facility is exempt for at least one of the following reasons: (Check each block that is applicable.)

[ ] (i) The facility does not manufacture, process or otherwise use any toxic chemicals listed under section 313(c) of EPCRA, 42 U.S.C. 11023(c);

[ ] (ii) The facility does not have 10 or more full-time employees as specified in section 313.(b)(1)(A) of EPCRA 42 U.S.C. 11023(b)(1)(A);

[ ] (iii) The facility does not meet the reporting thresholds of toxic chemicals established under section 313(f) of EPCRA, 42 U.S.C. 11023(f) (including the alternate thresholds at 40 CFR 372.27, provided an appropriate certification form has been filed with EPA);

[ ] (iv) The facility does not fall within Standard Industrial Classification Code (SIC) major groups 20 through 39 or their corresponding North American Industry Classification System (NAICS) sectors 31 through 33; or

[ ] (v) The facility is not located within any State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the United States Virgin Islands, the Northern Mariana Islands, or any other territory or possession over which the United States has jurisdiction.

252.209-7001 DISCLOSURE OF OWNERSHIP OR CONTROL BY THE GOVERNMENT OF A TERRORIST COUNTRY (MAR 1998)

(a) "Definitions."

As used in this provision --

(1) "Government of a terrorist country" includes the state and the government of a terrorist country, as well as any political subdivision, agency, or instrumentality thereof.

(2) "Terrorist country" means a country determined by the Secretary of State, under section 6(j)(1)(A) of the Export Administration Act of 1979 (50 U.S.C. App. 2405(j)(i)(A)), to be a country the government of which has repeatedly provided support for such acts of international terrorism. As of the date of this provision, terrorist countries include: Cuba, Iran, Iraq, Libya, North Korea, Sudan, and Syria.

(3) "Significant interest" means --

(i) Ownership of or beneficial interest in 5 percent or more of the firm's or subsidiary's securities. Beneficial interest includes holding 5 percent or more of any class of the firm's securities in "nominee shares," "street names," or some other method of holding securities that does not disclose the beneficial owner;

(ii) Holding a management position in the firm, such as a director or officer;

(iii) Ability to control or influence the election, appointment, or tenure of directors or officers in the firm;

(iv) Ownership of 10 percent or more of the assets of a firm such as equipment, buildings, real estate, or other tangible assets of the firm; or

(v) Holding 50 percent or more of the indebtedness of a firm.

(b) "Prohibition on award."

In accordance with 10 U.S.C. 2327, no contract may be awarded to a firm or a subsidiary

of a firm if the government of a terrorist country has a significant interest in the firm or subsidiary or, in the case of a subsidiary, the firm that owns the subsidiary, unless a waiver is granted by the Secretary of Defense.

(c) "Disclosure."

If the government of a terrorist country has a significant interest in the Offeror or a subsidiary of the Offeror, the Offeror shall disclosure such interest in an attachment to its offer. If the Offeror is a subsidiary, it shall also disclose any significant interest the government of a terrorist country has in any firm that owns or controls the subsidiary. The disclosure shall include --

(1) Identification of each government holding a significant interest; and

(2) A description of the significant interest held by each government.

(End of provision)

252.247-7022 REPRESENTATION OF EXTENT OF TRANSPORTATION BY SEA (AUG 1992)

(a) The Offeror shall indicate by checking the appropriate blank in paragraph (b) of this provision whether transportation of supplies by sea is anticipated under the resultant contract. The term supplies is defined in the Transportation of Supplies by Sea clause of this solicitation.

(b) Representation. The Offeror represents that it:

____ (1) Does anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

____ (2) Does not anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

(c) Any contract resulting from this solicitation will include the Transportation of Supplies by Sea clause. If the Offeror represents that it will not use ocean transportation, the resulting contract will also include the Defense FAR Supplement clause at 252.247-7024, Notification of Transportation of Supplies by Sea.

(End of provision)

52.0-4031 CORPORATE CERTIFICATION

IF A BIDDER IS A CORPORATION OR IF CORPORATION IS PARTICIPATING IN A JOINT VENTURE, PLEASE COMPLETE THE FOLLOWING CERTIFICATION:

I, _____, certify that I am secretary of the corporation named as Contractor herein; that _____ who signed this contract on behalf of the Contractor; was then _____ of said corporation; that said contract was duly signed for and on behalf of said corporation by authority of its governing body and is within the scope of its corporate powers.

(CORPORATE SEAL)

_____
(Secretary)

IF A CORPORATION IS PARTICIPATING AS A JOINT VENTURE, ITS SECRETARY MUST SUBMIT A CERTIFICATE STATING THE CORPORATION IS AUTHORIZED TO PARTICIPATE.

END OF SECTION 00600

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SECTION 00700

Contract Clauses

CLAUSES INCORPORATED BY FULL TEXT

52.202-1 DEFINITIONS (OCT 1995) --ALTERNATE I (APR 1984)

(a) "Head of the agency" (also called "agency head") or "Secretary" means the Secretary (or Attorney General, Administrator, Governor, Chairperson, or other chief official, as appropriate) of the agency, including any deputy or assistant chief official of the agency; and the term "authorized representative" means any person, persons, or board (other than the Contracting Officer) authorized to act for the head of the agency or Secretary.

(b) "Commercial component" means any component that is a commercial item.

(c) "Component" means any item supplied to the Federal Government as part of an end item or of another component.

(d) "Nondevelopmental item" means--

(1) Any previously developed item of supply used exclusively for governmental purposes by a Federal agency, a State or local government, or a foreign government with which the United States has a mutual defense cooperation agreement;

(2) Any item described in paragraph (e)(1) of this definition that requires only minor modification or modifications of a type customarily available in the commercial marketplace in order to meet the requirements of the procuring department or agency; or

(3) Any item of supply being produced that does not meet the requirements of paragraph (e)(1) or (e)(2) solely because the item is not yet in use.

(e) "Contracting Officer" means a person with the authority to enter into, administer, and/or terminate contracts and make related determinations and findings. The term includes certain authorized representatives of the Contracting Officer acting within the limits of their authority as delegated by the Contracting Officer.

(f) Except as otherwise provided in this contract, the term "subcontracts" includes, but is not limited to, purchase orders and changes and modifications to purchase orders under this contract.

52.203-3 GRATUITIES (APR 1984)

(a) The right of the Contractor to proceed may be terminated by written notice if, after notice and hearing, the agency head or a designee determines that the Contractor, its agent, or another representative--

(1) Offered or gave a gratuity (e.g., an entertainment or gift) to an officer, official, or employee of the Government; and

(2) Intended, by the gratuity, to obtain a contract or favorable treatment under a contract.

(b) The facts supporting this determination may be reviewed by any court having lawful jurisdiction.

(c) If this contract is terminated under paragraph (a) of this clause, the Government is entitled--

(1) To pursue the same remedies as in a breach of the contract; and

(2) In addition to any other damages provided by law, to exemplary damages of not less than 3 nor more than 10 times the cost incurred by the Contractor in giving gratuities to the person concerned, as determined by the agency head or a designee. (This subparagraph (c)(2) is applicable only if this contract uses money appropriated to the Department of Defense.)

(d) The rights and remedies of the Government provided in this clause shall not be exclusive and are in addition to any other rights and remedies provided by law or under this contract.

(End of clause)

52.203-5 COVENANT AGAINST CONTINGENT FEES (APR 1984)

(a) The Contractor warrants that no person or agency has been employed or retained to solicit or obtain this contract upon an agreement or understanding for a contingent fee, except a bona fide employee or agency. For breach or violation of this warranty, the Government shall have the right to annul this contract without liability or, in its discretion, to deduct from the contract price or consideration, or otherwise recover, the full amount of the contingent fee.

(b) "Bona fide agency," as used in this clause, means an established commercial or selling

agency, maintained by a contractor for the purpose of securing business, that neither exerts nor proposes to exert improper influence to solicit or obtain Government contracts nor holds itself out as being able to obtain any Government contract or contracts through improper influence.

"Bona fide employee," as used in this clause, means a person, employed by a contractor and subject to the contractor's supervision and control as to time, place, and manner of performance, who neither exerts nor proposes to exert improper influence to solicit or obtain Government contracts nor holds out as being able to obtain any Government contract or contracts through improper influence.

"Contingent fee," as used in this clause, means any commission, percentage, brokerage, or other fee that is contingent upon the success that a person or concern has in securing a Government contract.

"Improper influence," as used in this clause, means any influence that induces or tends to induce a Government employee or officer to give consideration or to act regarding a Government contract on any basis other than the merits of the matter.

(End of clause)

52.203-7 ANTI-KICKBACK PROCEDURES. (JUL 1995)

(a) Definitions.

"Kickback," as used in this clause, means any money, fee, commission, credit, gift, gratuity, thing of value, or compensation of any kind which is provided, directly or indirectly, to any prime Contractor, prime Contractor employee, subcontractor, or subcontractor employee for the purpose of improperly obtaining or rewarding favorable treatment in connection with a prime contract or in connection with a subcontract relating to a prime contract.

"Person," as used in this clause, means a corporation, partnership, business association of any kind, trust, joint-stock company, or individual.

"Prime contract," as used in this clause, means a contract or contractual action entered into by the United States for the purpose of obtaining supplies, materials, equipment, or services of any kind.

"Prime Contractor," as used in this clause, means a person who has entered into a prime contract with the United States.

"Prime Contractor employee," as used in this clause, means any officer, partner, employee, or agent of a prime Contractor.

"Subcontract," as used in this clause, means a contract or contractual action entered into by a prime Contractor or subcontractor for the purpose of obtaining supplies, materials, equipment, or

services of any kind under a prime contract.

"Subcontractor," as used in this clause, (1) means any person, other than the prime Contractor, who offers to furnish or furnishes any supplies, materials, equipment, or services of any kind under a prime contract or a subcontract entered into in connection with such prime contract, and (2) includes any person who offers to furnish or furnishes general supplies to the prime Contractor or a higher tier subcontractor.

"Subcontractor employee," as used in this clause, means any officer, partner, employee, or agent of a subcontractor.

(b) The Anti-Kickback Act of 1986 (41 U.S.C. 51-58) (the Act), prohibits any person from -

(1) Providing or attempting to provide or offering to provide any kickback;

(2) Soliciting, accepting, or attempting to accept any kickback; or

(3) Including, directly or indirectly, the amount of any kickback in the contract price charged by a prime Contractor to the United States or in the contract price charged by a subcontractor to a prime Contractor or higher tier subcontractor.

(c)(1) The Contractor shall have in place and follow reasonable procedures designed to prevent and detect possible violations described in paragraph (b) of this clause in its own operations and direct business relationships.

(2) When the Contractor has reasonable grounds to believe that a violation described in paragraph (b) of this clause may have occurred, the Contractor shall promptly report in writing the possible violation. Such reports shall be made to the inspector general of the contracting agency, the head of the contracting agency if the agency does not have an inspector general, or the Department of Justice.

(3) The Contractor shall cooperate fully with any Federal agency investigating a possible violation described in paragraph (b) of this clause.

(4) The Contracting Officer may (i) offset the amount of the kickback against any monies owed by the United States under the prime contract and/or (ii) direct that the Prime Contractor withhold, from sums owed a subcontractor under the prime contract, the amount of any kickback. The Contracting Officer may order the monies withheld under subdivision (c)(4)(ii) of this clause be paid over to the Government unless the Government has already offset those monies under subdivision (c)(4)(i) of this clause. In either case, the Prime Contractor shall notify the Contracting Officer when the monies are withheld.

(5) The Contractor agrees to incorporate the substance of this clause, including this subparagraph (c)(5) but excepting subparagraph (c)(1), in all subcontracts under this contract which exceed $100,000.

52.203-8 CANCELLATION, RESCISSION, AND RECOVERY OF FUNDS FOR ILLEGAL OR IMPROPER ACTIVITY (JAN 1997)

(a) If the Government receives information that a contractor or a person has engaged in conduct constituting a violation of subsection (a), (b), (c), or (d) of Section 27 of the Office of Federal Procurement Policy Act (41 U.S.C. 423) (the Act), as amended by section 4304 of the 1996 National Defense Authorization Act for Fiscal Year 1996 (Pub. L. 104-106), the Government may--

(1) Cancel the solicitation, if the contract has not yet been awarded or issued; or

(2) Rescind the contract with respect to which--

(i) The Contractor or someone acting for the Contractor has been convicted for an offense where the conduct constitutes a violation of subsection 27 (a) or (b) of the Act for the purpose of either--

(A) Exchanging the information covered by such subsections for anything of value; or

(B) Obtaining or giving anyone a competitive advantage in the award of a Federal agency procurement contract; or

(ii) The head of the contracting activity has determined, based upon a preponderance of the evidence, that the Contractor or someone acting for the Contractor has engaged in conduct constituting an offense punishable under subsections 27(e)(1) of the Act.

(b) If the Government rescinds the contract under paragraph (a) of this clause, the Government is entitled to recover, in addition to any penalty prescribed by law, the amount expended under the contract.

(c) The rights and remedies of the Government specified herein are not exclusive, and are in addition to any other rights and remedies provided by law, regulation, or under this contract.

52.203-10 PRICE OR FEE ADJUSTMENT FOR ILLEGAL OR IMPROPER ACTIVITY (JAN 1997)

(a) The Government, at its election, may reduce the price of a fixed-price type contract and the total cost and fee under a cost-type contract by the amount of profit or fee determined as set forth

in paragraph (b) of this clause if the head of the contracting activity or designee determines that there was a violation of subsection 27 (a), (b), or (c) of the Office of Federal Procurement Policy Act, as amended (41 U.S.C. 423), as implemented in section 3.104 of the Federal Acquisition Regulation.

(b) The price or fee reduction referred to in paragraph (a) of this clause shall be--

(1) For cost-plus-fixed-fee contracts, the amount of the fee specified in the contract at the time of award;

(2) For cost-plus-incentive-fee contracts, the target fee specified in the contract at the time of award, notwithstanding any minimum fee or "fee floor" specified in the contract;

(3) For cost-plus-award-fee contracts--

(i) The base fee established in the contract at the time of contract award;

(ii) If no base fee is specified in the contract, 30 percent of the amount of each award fee otherwise payable to the Contractor for each award fee evaluation period or at each award fee determination point.

(4) For fixed-price-incentive contracts, the Government may--

(i) Reduce the contract target price and contract target profit both by an amount equal to the initial target profit specified in the contract at the time of contract award; or

(ii) If an immediate adjustment to the contract target price and contract target profit would have a significant adverse impact on the incentive price revision relationship under the contract, or adversely affect the contract financing provisions, the Contracting Officer may defer such adjustment until establishment of the total final price of the contract. The total final price established in accordance with the incentive price revision provisions of the contract shall be reduced by an amount equal to the initial target profit specified in the contract at the time of contract award and such reduced price shall be the total final contract price.

(5) For firm-fixed-price contracts, by 10 percent of the initial contract price or a profit amount determined by the Contracting Officer from records or documents in existence prior to the date of the contract award.

(c) The Government may, at its election, reduce a prime contractor's price or fee in accordance with the procedures of paragraph (b) of this clause for violations of the Act by its subcontractors by an amount not to exceed the amount of profit or fee reflected in the subcontract at the time the subcontract was first definitively priced.

(d) In addition to the remedies in paragraphs (a) and (c) of this clause, the Government may terminate this contract for default. The rights and remedies of the Government specified herein are not exclusive, and are in addition to any other rights and remedies provided by law or under

this contract.

(End of clause)

52.203-12 LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS (JUN 1997)

(a) Definitions.

"Agency," as used in this clause, means executive agency as defined in 2.101.

"Covered Federal action," as used in this clause, means any of the following Federal actions:

(1) The awarding of any Federal contract.

(2) The making of any Federal grant.

(3) The making of any Federal loan.

(4) The entering into of any cooperative agreement.

(5) The extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

"Indian tribe" and "tribal organization," as used in this clause, have the meaning provided in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450B) and include Alaskan Natives.

"Influencing or attempting to influence," as used in this clause, means making, with the intent to influence, any communication to or appearance before an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any covered Federal action.

"Local government," as used in this clause, means a unit of government in a State and, if chartered, established, or otherwise recognized by a State for the performance of a governmental duty, including a local public authority, a special district, an intrastate district, a council of governments, a sponsor group representative organization, and any other instrumentality of a local government.

"Officer or employee of an agency," as used in this clause, includes the following individuals who are employed by an agency:

(1) An individual who is appointed to a position in the Government under title 5, United States Code, including a position under a temporary appointment.

(2) A member of the uniformed services, as defined in subsection 101(3), title 37, United States Code.

(3) A special Government employee, as defined in section 202, title 18, United States Code.

(4) An individual who is a member of a Federal advisory committee, as defined by the Federal Advisory Committee Act, title 5, United States Code, appendix 2.

"Person," as used in this clause, means an individual, corporation, company, association, authority, firm, partnership, society, State, and local government, regardless of whether such entity is operated for profit, or not for profit. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Reasonable compensation," as used in this clause, means, with respect to a regularly employed officer or employee of any person, compensation that is consistent with the normal compensation for such officer or employee for work that is not furnished to, not funded by, or not furnished in cooperation with the Federal Government.

"Reasonable payment," as used in this clause, means, with respect to professional and other technical services, a payment in an amount that is consistent with the amount normally paid for such services in the private sector.

"Recipient," as used in this clause, includes the Contractor and all subcontractors. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Regularly employed," as used in this clause, means, with respect to an officer or employee of a person requesting or receiving a Federal contract, an officer or employee who is employed by such person for at least 130 working days within 1 year immediately preceding the date of the submission that initiates agency consideration of such person for receipt of such contract. An officer or employee who is employed by such person for less than 130 working days within 1 year immediately preceding the date of the submission that initiates agency consideration of such person shall be considered to be regularly employed as soon as he or she is employed by such person for 130 working days.

"State," as used in this clause, means a State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, a territory or possession of the United States, an agency or instrumentality of a State, and multi-State, regional, or interstate entity having governmental duties and powers.

(b) Prohibitions.

(1) Section 1352 of title 31, United States Code, among other things, prohibits a recipient of a Federal contract, grant, loan, or cooperative agreement from using appropriated funds to pay any person for influencing or attempting to influence an officer or employee of any agency, a

Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any of the following covered Federal actions: the awarding of any Federal contract; the making of any Federal grant; the making of any Federal loan; the entering into of any cooperative agreement; or the modification of any Federal contract, grant, loan, or cooperative agreement.

(2) The Act also requires Contractors to furnish a disclosure if any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a Federal contract, grant, loan, or cooperative agreement.

(3) The prohibitions of the Act do not apply under the following conditions:

(i) Agency and legislative liaison by own employees.

(A) The prohibition on the use of appropriated funds, in subparagraph (b)(1) of this clause, does not apply in the case of a payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action if the payment is for agency and legislative liaison activities not directly related to a covered Federal action.

(B) For purposes of subdivision (b)(3)(i)(A) of this clause, providing any information specifically requested by an agency or Congress is permitted at any time.

(C) The following agency and legislative liaison activities are permitted at any time where they are not related to a specific solicitation for any covered Federal action:

(1) Discussing with an agency the qualities and characteristics (including individual demonstrations) of the person's products or services, conditions or terms of sale, and service capabilities.

(2) Technical discussions and other activities regarding the application or adaptation of theperson's products or services for an agency's use.

(D) The following agency and legislative liaison activities are permitted where they are prior to formal solicitation of any covered Federal action--

(1) Providing any information not specifically requested but necessary for an agency to make an informed decision about initiation of a covered Federal action;

(2) Technical discussions regarding the preparation of an unsolicited proposal prior to its official submission; and

(3) Capability presentations by persons seeking awards from an agency pursuant to the provisions of the Small Business Act, as amended by Pub. L. 95-507, and subsequent amendments.

(E) Only those services expressly authorized by subdivision (b)(3)(i)(A) of this clause are permitted under this clause.

(ii) Professional and technical services.

(A) The prohibition on the use of appropriated funds, in subparagraph (b)(1) of this clause, does not apply in the case of--

(1) A payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action, if payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal action.

(2) Any reasonable payment to a person, other than an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action if the payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal action. Persons other than officers or employees of a person requesting or receiving a covered Federal action include consultants and trade associations.

(B) For purposes of subdivision (b)(3)(ii)(A) of this clause, "professional and technical services" shall be limited to advice and analysis directly applying any professional or technical discipline. For example, drafting of a legal document accompanying a bid or proposal by a lawyer is allowable. Similarly, technical advice provided by an engineer on the performance or operational capability of a piece of equipment rendered directly in the negotiation of a contract is allowable. However, communications with the intent to influence made by a professional (such as a licensed lawyer) or a technical person (such as a licensed accountant) are not allowable under this section unless they provide advice and analysis directly applying their professional or technical expertise and unless the advice or analysis is rendered directly and solely in the preparation, submission or negotiation of a covered Federal action. Thus, for example, communications with the intent to influence made by a lawyer that do not provide legal advice or analysis directly and solely related to the legal aspects of his or her client’s proposal, but generally advocate one proposal over another are not allowable under this section because the lawyer is not providing professional legal services. Similarly, communications with the intent to influence made by an engineer providing an engineering analysis prior to the preparation or submission of a bid or proposal are not allowable under this section since the engineer is providing technical services but not directly in the preparation, submission or negotiation of a covered Federal action.

(C) Requirements imposed by or pursuant to law as a condition for receiving a covered Federal award include those required by law or regulation and any other requirements in the actual award documents.

(D) Only those services expressly authorized by subdivisions (b)(3)(ii)(A)(1) and (2) of this clause are permitted under this clause.

(E) The reporting requirements of FAR 3.803(a) shall not apply with respect to payments of reasonable compensation made to regularly employed officers or employees o

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SECTION 00800

SPECIAL CONTRACT REQUIREMENTS

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SECTION 00800 - SPECIAL CONTRACT REQUIREMENTS

1.1. COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK (APR 1984). The Contractor shall be required to (a) commence work under this contract within 10 calendar days after the date the Contractor receives the notice to proceed, (b) prosecute the work diligently, and (c) complete the entire work ready for use not later than 175 calendar days after the date of receipt by him of notice to proceed. The time stated for completion shall include final cleanup of the premises. (FAR 52.211-10)

1.2. NOT USED.

1.3. LIQUIDATED DAMAGES-CONSTRUCTION (Sept 2000).

(a) If the Contractor fails to complete the work within the time specified in the contract, the Contractor shall pay liquidated damages to the Government in the amount of $285.00 for each calendar day of delay until the work is completed or accepted.

(b) If the Government terminates the Contractor's right to proceed, liquidated damages will continue to accrue until the work is completed. These liquidated damages are in addition to excess costs of repurchase under the Termination clause.

1.4. EXCEPTION TO LIQUIDATED DAMAGES. The Contractor's obligations specified in Section 02935 – Establishment of Turf is exempt from liquidated damages.

1.5. CONTRACT DRAWINGS, MAPS, AND SPECIFICATIONS (Aug 2000).

(a) The Government will provide to the Contractor, without charge, one set of contract drawings and specifications, except publications incorporated into the technical provisions by reference, in electronic or paper media as chosen by the Contracting Officer.

(b) The Contractor shall --

(1) Check all drawings furnished immediately upon receipt;

(2) Compare all drawings and verify the figures before laying out the work;

(3) Promptly notify the Contracting Officer of any discrepancies;

(4) Be responsible for any errors that might have been avoided by complying with this paragraph (b); and

(5) Reproduce and print contract drawings and specifications as needed.

(c) In general --

(1) Large-scale drawings shall govern small-scale drawings; and

(2) The Contractor shall follow figures marked on drawings in preference to scale measurements.

(d) Omissions from the drawings or specifications or the misdescription of details of work that are manifestly necessary to carry out the intent of the drawings and specifications, or that are customarily performed, shall not relieve the Contractor from performing such omitted or misdescribed details of the work. The Contractor shall perform such details as if fully and correctly set forth and described in the drawings and specifications.

(e) The work shall conform to the specifications and the contract drawings identified on the following index of drawings:

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FILE NO. 001A0672 thru 006A0672
001A0197, 001A215,001A0217, 001A0219,
002A0213 thru 004A0213

INDEX TO DRAWINGS

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ROADWAY CROSS SECTIONS	(MILE 4.03)	3
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SUBSTRUCTURE DETAILS	(MILE 4.03)	5
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STANDARD TRAFFIC CONTROL DETAILS		TF-1
STANDARD RIPRAP DETAILS		RP-1
STANDARD GUARD RAIL DETAILS		GR-2

(DFARS 252.236 – 7001)

1.6. PHYSICAL DATA (APR 1984). Data and information furnished or referred to below are for the Contractor's information. The Government shall not be responsible for any interpretation of or conclusion drawn from the data or information by the Contractor.

a. The indications of physical conditions on the drawings and in the specifications are the result of site investigations by aerial photographs and topographic surveys.

b. Weather Conditions. Information with respect to temperatures and precipitation may be obtained from the National Weather Service. Also see 1.28, "Time Extensions for Unusually Severe Weather".

c. Additional Data. Additional data consisting of cross sections, river stage records, records of borings, and boring samples may be available for inspection at the U.S. Army Engineer District, Memphis, Tennessee. (FAR 52.236-4)

1.7. RIGHTS-OF-WAY.

a. The rights-of-way and easements for the work to be constructed under this contract within the limits indicated on the drawings will be provided by the Government without cost to the Contractor. However, the Contractor shall make his own arrangements with the appropriate owners or organizations for transporting his equipment across, over or under railroad tracks, highways, bridges, private property, and utility lines and shall provide at his own expense any additional right-of-way or easements required to effect such crossings, including insurance requirements of owners. Limits of right-of-way which will be provided by the Government are as indicated on the drawings.

b. The Contractor shall, upon reasonable notice, without expense to the Government and at any time during the progress of the work when not being actively used for contract operations, promptly vacate and clean up any part of the Government grounds that have been allotted to or have been in use by him when directed to do so by the Contracting Officer.

c. The Contractor shall not obstruct any existing roads on the lands controlled by the United States except with the permission of the Contracting Officer, and shall maintain such roads in as good condition as exists at the time of commencement of the work.

d. Any additional right-of-way required for access or for the Contractor's method of operation must be obtained by and at the expense of the Contractor. The Contractor shall submit written evidence to the Contracting Officer that he has obtained the rights-of-way from the property owners. The written evidence shall consist of an authenticated copy of the conveyance under which the Contractor acquired the rights-of-way, prepared and executed in accordance with the laws of the State of Missouri. If temporary rights are obtained by the Contractor, the period of time shall coincide with Clause 1.1, "Commencement, Prosecution, and Completion of Work", of the SPECIAL CONTRACT REQUIRMENTS CLAUSES, plus a reasonable time for any extension granted for completion of the work. The Contractor shall be solely responsible for any and all damages, claims for damages, and liability of any nature whatsoever arising from or growing out of the use of rights-of-way other than those rights-of-way furnished by the Government.

e. The Contractor shall repair, at his own expense, any and all damage to the existing roads when such damage is a result of his operations on this contract. The Contractor shall also replace, at his own expense, any and all surfacing displaced or damaged by his operations on this contract. The repairs and/or replacement shall be done to the satisfaction of the Contracting Officer.

1.8. LAYOUT OF WORK.

a. The Contractor will establish the following baselines and bench marks at the site of the work:

(1) Baselines as shown on the drawings.

(2) Bench marks as shown on the drawings.

b. The Contractor shall complete the layout of the work and shall be responsible for all measurements that may be required for the execution of the work to the location and limit marks prescribed in the specifications or on the contract drawings, subject to such modifications as the Contracting Officer may require to meet changed conditions or as a result of necessary modifications to the contract work.

c. The Contractor shall furnish, at his own expense, such stakes,

templates, platforms, equipment, tools and materials, and all labor as may be required in laying out any part of the work. It shall be the responsibility of the Contractor to maintain and preserve all stakes and marks established by the Contracting Officer until authorized to remove them, and if such marks are destroyed, by the Contractor or through his negligence, prior to their authorized removal, they may be replaced by the Contracting Officer, at his discretion, and the expense of replacement will be deducted from any amounts due or to become due the Contractor. The Contracting Officer may require that work be suspended at any time when location and limit marks established by the Contractor are not reasonably adequate to permit checking of the work.

1.9. THRU 1.10. NOT USED.

1.11. PROGRESS CHART. The progress chart required by provisions of paragraph (a) of the CONTRACT CLAUSE entitled "Schedules for Construction Contracts" shall be prepared on ENG Form 2454, copies of which will be furnished to the Contractor by the Government. THREE COPIES OF THE SCHEDULE WILL BE REQUIRED.

1.12. SAFETY-RELATED SPECIAL REQUIREMENTS. ALL WORK UNDER THIS CONTRACT SHALL COMPLY WITH THE LATEST VERSION OF U.S. ARMY CORPS OF ENGINEERS SAFETY AND HEALTH REQUIREMENTS MANUAL, EM 385-1-1, AND OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) STANDARDS IN EFFECT ON THE DATE OF THE SOLICITATION. NO SEPARATE PAYMENT WILL BE MADE FOR COMPLIANCE WITH EM 385-1-1, NOR FOR COMPLIANCE WITH ANY OF THE OTHER SAFETY-RELATED SPECIAL REQUIREMENTS.

a. Accident Investigations and Reporting. Refer to EM 385-1-1, Section 1. Accidents shall be investigated and reports completed by the immediate supervisor of the employee(s) involved and reported to the Contracting Officer or his representative within one working day after the accident occurs.

b. Accident Prevention Program. Refer to the CONTRACT CLAUSE entitled, "Accident Prevention (Alternate I)". Within 21 days after receipt of Notice of Award of the contract, four copies of the Accident Prevention Program shall be submitted to the Contracting Officer for review and approval. The program shall be prepared in the following format:

(1) An executed LMV Form 358R, Administrative Plan (available upon request).

(2) An executed LMV Form 359R, Activity Hazard Analysis (available upon request).

(3) A copy of company policy statement regarding accident prevention.

(4) When marine plant and equipment are in use under a contract, the method of fuel oil transfer shall be submitted on LMV Form 414R, Fuel Oil Transfer, (available upon request). (Refer to 33 CFR 156.)

The Contractor shall not commence physical work at the site until the program has been approved by the Contracting Officer, or his authorized representative. At the Contracting Officer’s discretion, the Contractor may submit his Activity Hazard Analysis for only the first phase of construction provided that it is accompanied by an outline of the remaining phases of construction. All remaining phases shall be submitted and accepted prior to the beginning of work in each phase. Also refer to Section 1 of EM 385-1-1.

c. Daily Inspections. The Contractor shall perform daily safety inspections and record them on the forms approved by the Contracting Officer. Reports of daily inspections shall be maintained at the jobsite. The reports shall be records of the daily inspections and resulting actions. Each report

will include, as a minimum, the following:

(1) Phase(s) of construction underway during the inspection.

(2) Locations or areas inspections were made.

(3) Results of inspection, including nature of deficiencies observed and corrective actions taken, or to be taken, date, and signature of the person responsible for its contents.

d. Machinery and Mechanized Equipment. Machinery and mechanized equipment used under this contract shall comply with the following:

(1) When mechanized equipment is operated on floating plant, the Contractor shall provide positive and acceptable means of preventing this equipment from moving or falling into the water. The type of equipment addressed by this clause includes front-end loaders, bulldozers, trucks (both on- and off-road), backhoes, track hoes, and similar equipment. If the Contractor plans to use such equipment on floating plant, an activity hazard analysis must be developed for this feature of work. The plan must include a detailed explanation of the type or types of physical barriers, curbs, structures, etc., which will be incorporated to protect the operator and prevent the equipment from entering the water. Nonstructural warning devices may be considered for situations where the use of structural barriers is determined to be impracticable. The activity hazard analysis must thoroughly address the procedure and be submitted to the Corps for review and acceptance prior to start of this feature of work.

(2) The stability of crawler, truck, and wheelmounted cranes shall be assured.

(a) The manufacturer's load-rating chart may be used to determine the maximum allowable working load for each particular crane's boom angle provided a test load, with a boom angle of 20 degrees, confirms the manufacturer's load-rating table.

(b) Stability tests are required if:

(i) There is no manufacturer's load-rating chart securely fixed to the operator's cab;

(ii) There has been a change in the boom or other structural members; or

(iii) There has been a change in the counter-weight.

The test shall consist of lifting a load with the boom in the least stable undercarriage position and at an angle of 20 degrees above the horizontal. The test shall be conducted under close supervision on a firm, level surface. The load that tilts the machine shall be identified as the test load. The test load moment (in ft-lbs) shall then be calculated by multiplying the horizontal distance (in ft) from the center of rotation of the machine to the test load, times the test load (in lbs). Three-fourths of this test load moment shall then be used to compute the maximum allowable operating loads for the boom at 20, 40, 60, and 80 degrees above horizontal. From these maximum allowable operating loads, a curve shall be plotted and posted in the cab of the machine in sight of the operator. These values shall not be exceeded except in the performance test described below. The test load shall never exceed 110 percent of the manufacturer's maximum rated capacity.

(c) In lieu of the test and computations above, the crane may be load tested for stability at each of the four boom positions listed

above.

(3) Performance tests shall be performed in accordance with Section 16 of EM 385-1-1. Performance tests shall be conducted after each stability test, when the crane is placed in service on a project, and at least every 12 months.

(4) Inspections shall be made which will ensure a safe and economical operation of both cranes and draglines. Specific inspections and their frequencies are listed on the appropriate check lists noted below. Results of inspections and tests for cranes shall be recorded on the Safety Inspection Checklist, LMV Form 326R (available upon request), and inspection results for draglines shall be recorded on LMV Form 373R (available upon request). Copies of the inspections and tests shall be available at the jobsite for review. All stability and performance tests on cranes and all complete dragline inspections shall be witnessed by the Contracting Officer or his authorized representative.

(5) A complete dragline inspection shall be made:

(a) At least annually;

(b) Prior to the dragline being placed in operation; and

(c) After the dragline has been out of service for more than six months.

e. Safety Sign. The Contractor shall furnish, erect, and maintain a safety sign at the site, as located by the Contracting Officer. The sign shall conform to the requirements of this paragraph and the drawing entitled "Safety Sign", included at the end of these Special Contract Requirements. The lettering shall be black and the background white. When placed on a floating plant, the sign may be half size. Upon request, the Government will furnish a decal of the Engineer Castle. The sign shall be erected as soon as practicable, but not later than 15 calendar days after the date established for commencement of work. The data required shall be current.

1.13. BASIS FOR SETTLEMENT OF PROPOSALS (JAN 1997). Actual costs will be used to determine equipment costs for a settlement proposal submitted on the total cost basis under FAR 49.206-2(b). In evaluating a terminations settlement proposal using the total cost basis, the following principles will be applied to determine allowable equipment costs:

(1) Actual costs for each piece of equipment, or groups of similar serial or series equipment, need not be available in the Contractor’s accounting records to determine total actual equipment costs.

(2) If equipment costs have been allocated to a contract using predetermined rates, those charges will be adjusted to actual costs.

(3) Recorded job costs adjusted for unallowable expenses will be used to determine equipment operating expenses.

(4) Ownership costs (depreciation) will be determined using the Contractor’s depreciation schedule (subject to the provisions of FAR 31.205-11).

(5) License, taxes, storage and insurance costs are normally recovered as an indirect expense and unless the Contractor charges these costs directly to contracts, they will be recovered through the indirect expense rate. (EFARS 52.249-5000)

1.14. CERTIFICATES OF COMPLIANCE. Any certificates required for demonstrating proof of compliance of material with specification requirements shall be executed in four (4) copies. Each certificate shall be signed by an official authorized to certify on behalf of the manufacturing company and shall contain the name and address of the Contractor, the project name and location, and the quantity and date or dates of shipment or delivery to which the certificates apply. Copies of laboratory test reports submitted with certificates shall contain the name and address of the testing laboratory and the date or dates of the test to which the report applies. Certification shall not be construed as relieving the Contractor from furnishing satisfactory material, if, after tests are performed on selected samples, the material is found not to meet the specific requirements.

1.15. CONTRACTOR'S CERTIFICATE. Each submittal of shop drawings and materials data shall be accompanied by a certificate, signed by the head of the Quality Control Organization of the prime Contractor, that the prime Contractor has reviewed in detail all shop drawings and materials contained in the submittal and that they are correct and in strict conformance with the contract drawings and specifications except as may be otherwise explicitly stated. The Government will first check for the Contractor's certificate and then review and render approval action or indicate disapproval in those cases where contract requirements are not fulfilled.

1.16. SHOP DRAWINGS. The Contractor shall submit to the Contracting Officer for approval 6 copies of all shop drawings as called for under the various headings of these specifications. These drawings shall be complete and detailed. If approved by the Contracting Officer, each copy of the drawings will be identified as having received such approval by being so stamped and dated. The Contractor shall make any correction required by the Contracting Officer. If the Contractor considers any correction indicated on the drawings to constitute a change to the contract drawings or specifications, notice as required under the CONTRACT CLAUSE entitled "Changes", will be given to the Contracting Officer. Five sets of all shop drawings will be retained by the Contracting Officer and one set will be returned to the Contractor. The approval of the drawings by the Contracting Officer shall not be construed as a complete check, but will indicate only that the general method of construction and detailing is satisfactory. Approval of such drawings will not relieve the Contractor of the responsibility for any errors which may exist as the Contractor shall be responsible for the dimensions and design of adequate connections, details, and satisfactory construction of all work.

1.17. AS-BUILT DRAWINGS. The Contractor shall maintain two (2) full-size sets of the Contract drawings depicting a current record of the work as actually constructed. One set is for the Contractor's use and one for the Government's use. These working as-built drawing red-line mark-ups may be manually or electronically generated using the construction plans. These working as-built drawings shall be reviewed at least monthly with the Contracting Officer, prior to the Contractor submitting a request for progress payment. Both shall certify that the as-built drawings are accurate and up-to-date before progress payment is made. Upon completion of the work and not later than 60 days from acceptance, the Contractor shall deliver a complete final set of the as-built red-line marked-up plans depicting the construction as actually accomplished. The final as-built drawings shall be identified as such by marking or stamping them with the words "AS-BUILT DRAWINGS" in letters at least 3/16" high. Those drawings where no change is involved shall be marked or stamped "AS-BUILT, NO CHANGE". Compliance and delivery of the final as-built drawings will be enforced through the approval of final payment. Also, the quality of the final as-built drawings will be reflected in the Contract's performance evaluation.

1.18. DAMAGE TO WORK. The responsibility for damage to any part of the permanent work shall be as set forth in the CONTRACT CLAUSE entitled "Permits and Responsibilities". However, if, in the judgement of the Contracting Officer, any

part of the permanent work performed by the Contractor is damaged by flood, tornado, or earthquake, which damage is not due to the failure of the Contractor to take reasonable precautions or to exercise sound engineering and construction practices in the conduct of the work, the Contractor will make the repairs as ordered by the Contracting Officer and full compensation for such repairs will be made at the applicable contract unit or lump sum prices as fixed and established in the contract. If, in the opinion of the Contracting Officer, there are no contract unit or lump sum prices applicable to any part of such work, an equitable adjustment pursuant to the CONTRACT CLAUSE entitled "Changes" will be made as full compensation for the repairs of that part of the permanent work for which there are no applicable contract unit or lump sum prices. Except as herein provided, damage to all work (including temporary construction), utilities, materials, equipment and plant shall be repaired to the satisfaction of the Contracting Officer at the Contractor's expense regardless of the cause of such damage.

1.19. NOTIFICATION OF AREA ENGINEER BEFORE BEGINNING WORK. At least 7 days before beginning work, the Contractor shall notify Mr. Stephen P. Shankle, Area Engineer, Caruthersville Area Office, 706 Harry S. Truman Blvd., Caruthersville, Missouri, 63830-1268. (573) 333-1043. COLLECT CALLS WILL NOT BE ACCEPTED.

1.20. EQUIPMENT OWNERSHIP AND OPERATING EXPENSE SCHEDULE (MAR 1995).

a. This clause does not apply to terminations. See SPECIAL CONTRACT REQUIREMENT entitled, "Basis for Settlement of Proposals" and FAR Part 49.

b. Allowable cost for construction and marine plant and equipment in sound workable condition owned or controlled and furnished by a Contractor or subcontractor at any tier shall be based on actual cost data for each piece of equipment or groups of similar serial and series for which the Government can determine both ownership and operating costs from the Contractor's accounting records. When both ownership and operating costs cannot be determined for any piece of equipment or groups of similar serial or series equipment from the Contractor's accounting records, costs for that equipment shall be based upon the applicable provisions of EP 1110-1-8, Construction Equipment Ownership and Operating Expense Schedule, Region III. Working conditions shall be considered to be average for determining equipment rates using the schedule unless specified otherwise by the Contracting Officer. For equipment not included in the schedule, rates for comparable pieces of equipment may be used or a rate may be developed using the formula provided in the schedule. For forward pricing, the schedule in effect at the time of negotiations shall apply. For retroactive pricing, the schedule in effect at the time the work was performed shall apply.

c. Equipment rental costs are allowable, subject to the provisions of FAR 31.105(d)(2)(ii) and FAR 31.205-36. Rates for equipment rented from an organization under common control, lease-purchase arrangements, and sale-lease-back arrangements, will be determined using the schedule, except that actual rates will be used for equipment leased from an organization under common control that has an established practice of leasing the same or similar equipment to unaffiliated lessees.

d. When actual equipment costs are proposed and the total amount of the pricing action exceeds the small purchase threshold, the Contracting Officer shall request the Contractor to submit either certified cost or pricing data, or partial/limited data, as appropriate. The data shall be submitted on Standard Form 1411, Contract Pricing Proposal Cover Sheet. (EFARS 52.231-5000)

NOTE: THE CONTRACTOR MAY PURCHASE THE EQUIPMENT MANUAL FROM THE GOVERNMENT PRINTING OFFICE. THE GOVERNMENT PRINTING OFFICE TELEPHONE NO. IS 202-512-1800.

1.21. RETESTING OF CONSTRUCTION MATERIALS. Unless otherwise specified,

where the Technical Specifications state that tests will be performed at the expense of the Government, the cost of only the initial test will be borne by the Government. Any retesting due to failure of the materials to meet the requirements in the initial test or any retesting requested by the Contractor shall be performed at the Contractor's expense. The retests shall be at laboratories approved by the Contracting Officer. The costs of retests made at Government laboratories will be deducted from the total amount due the Contractor.

1.22. VEHICLE WEIGHT LIMITATIONS. Vehicle weight limitations for operation on roads, streets, and bridges may affect the prosecution of work under this contract. The Contractor will be responsible for obtaining all necessary licenses and permits in accordance with the CONTRACT CLAUSE entitled "Permits and Responsibilities".

1.23. OBSTRUCTIONS.

a. There are no relocations needed at the site. If the Contractor desires additional relocations for his convenience, the Contractor shall make his own arrangements with the owners of the utilities. No separate payment as such will be made for the alteration of these utilities and the costs in connection therewith shall be considered as an incidental expense to the Contractor. The Contractor shall exercise special care when working in the vicinity of the utilities to prevent damage or injury to the Contractor's employees or others.

b. Prior to bridge construction, the contractor shall call the "Call Before You Dig" number for Missouri (1-800-DIG-RITE or 1-800-344-7483).

1.24. NOT USED.

1.25. PERFORMANCE OF WORK BY THE CONTRACTOR (APR 1984). The Contractor shall perform on the site, and with its own organization, work equivalent to at least fifteen (15) percent of the total amount of work to be performed under the contract. This percentage may be reduced by a supplemental agreement to this contract if, during performing the work, the Contractor requests a reduction and the Contracting Officer determines that the reduction would be to the advantage of the Government. (FAR 52.236-1)

1.26. CONTINUING CONTRACTS (MAR 1995).

a. This is a continuing contract, as authorized by Section 10 of the River and Harbor Act of September 22, 1922 (33 U.S. Code 621). The payment of some portion of the contract price is dependent upon reservations of funds from future appropriations, and from future contribution to the project having one or more non-federal project sponsors. The responsibilities of the Government are limited by this clause notwithstanding any contrary provision of the "Payments Under Fixed-Price Construction Contracts" clause or any other clause of this contract.

b. The sum of $1,000.00 has been reserved for this contract and is available for payments to the Contractor during the current fiscal year. It is expected that Congress will make appropriations for future fiscal years from which additional funds together with funds provided by one or more non-federal project sponsors will be reserved for this contract.

c. Failure to make payments in excess of the amount currently reserved, or that may be reserved from time to time, shall not entitle the Contractor to a price adjustment under the terms of this contract except as specifically provided in paragraphs "f" and "i" below. No such failure shall constitute a breach of this contract, except that this provision shall not bar

a breach-of-contract action if an amount finally determined to be due as a termination allowance remains unpaid for one year due solely to a failure to reserve sufficient additional funds therefor.

d. The Government may at any time reserve additional funds for payments under the contract if there are funds available for such purpose. The Contracting Officer will promptly notify the Contractor of any additional funds reserved for the contract by issuing an administrative modification to the contract.

e. If earnings will be such that funds reserved for the contract will be exhausted before the end of any fiscal year, the Contractor shall give written notice to the Contracting Officer of the estimated date of exhaustion and the amount of additional funds which will be needed to meet payments due or to become due under the contract during that fiscal year. This notice shall be given not less than 45 nor more than 60 days prior to the estimated date of exhaustion.

f. No payments will be made after exhaustion of funds except to the extent that additional funds are reserved for the contract. The Contractor shall be entitled to simple interest on any payment that the Contracting Officer determines was actually earned under the terms of the contract and would have been made except for exhaustion of funds. Interest shall be computed from the time such payment would otherwise have been made until actually or constructively made, and shall be at the rate established by the Secretary of the Treasury pursuant to Public Law 92-41, 85 STAT 97, as in effect on the first day of the delay in such payment.

g. Any suspension, delay, or interruption of work arising from exhaustion or anticipated exhaustion of funds shall not constitute a breach of this contract and shall not entitle the Contractor to any price adjustment under the "Suspension of Work" clause or in any other manner under this contract.

h. An equitable adjustment in performance time shall be made for any increase in the time required for performance of any part of the work arising from exhaustion of funds or the reasonable anticipation of exhaustion of funds.

i. If, upon the expiration of sixty (60) days after the beginning of the fiscal year following an exhaustion of funds, the Government has failed to reserve sufficient additional funds to cover payments otherwise due, the Contractor, by written notice delivered to the Contracting Officer at any time before such additional funds are reserved, may elect to treat his right to proceed with the work as having been terminated. Such a termination shall be considered a termination for the convenience of the Government.

j. If at any time it becomes apparent that the funds reserved for any fiscal year are in excess of the funds required to meet all payments due or to become due the Contractor because of work performed and to be performed under the contract during the fiscal year, the Government reserves the right, after notice to the Contractor, to reduce said reservation by the amount of such excess. (EFARS 52.232-5001)

1.27. NOT USED.

1.28. TIME EXTENSIONS FOR UNUSUALLY SEVERE WEATHER (31 OCT 1989).

a. This provision specifies the procedure for determination of time extensions for unusually severe weather in accordance with the CONTRACT CLAUSE entitled "Default (Fixed-Price Construction)". In order for the Contracting Officer to award a time extension under this clause, the following conditions must be satisfied:

(1) The weather experienced at the project site during the

contract period must be found to be unusually severe, that is, more severe than the adverse weather anticipated for the project location during any given month.

(2) The unusually severe weather must actually cause a delay to the completion of the project. The delay must be beyond the control and without the fault or negligence of the Contractor.

b. The following schedule of monthly anticipated adverse weather delays is based on National Oceanic and Atmospheric Administration (NOAA) or similar data for the project location and will constitute the base line for monthly weather time evaluations. The Contractor's progress schedule must reflect these anticipated adverse weather delays in all weather dependent activities.

MONTHLY ANTICIPATED ADVERSE WEATHER DELAY
WORK DAYS BASED ON (5) DAY WORK WEEK

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
11	8	8	6	7	5	5	3	4	4	7	10

c. Upon acknowledgment of the Notice to Proceed (NTP) and continuing throughout the contract, the Contractor will record on the daily CQC report, the occurrence of adverse weather and resultant impact to normally scheduled work. Actual adverse weather delay days must prevent work on critical activities for 50 percent or more of the Contractor's scheduled work day. The number of actual adverse weather delay days shall include days impacted by actual adverse weather (even if adverse weather occurred in previous month), be calculated chronologically from the first to the last day of each month, and be recorded as full days. If the number of actual adverse weather delay days exceeds the number of days anticipated in paragraph b, above, the Contracting Officer will convert any qualifying delays to calendar days, giving full consideration for equivalent fair weather work days, and issue a modification in accordance with the CONTRACT CLAUSE entitled "Default (Fixed-Price Construction)". (ER 415-1-15, Appendix A)

1.29. NOT USED.

1.30. STONE SOURCES.

a. Stone meeting the quality requirements of these specifications has been produced from the sources listed below:

Name of Firm	Name of Quarry	Location	Certification Date
Brickeys Stone, LLC	Old Menefee	Bloomsdale, MO	1997
Martin Marietta Aggregates	Three Rivers	Smithland, KY	1996
Meridian Aggregate Co.	Valley Stone	Black Rock, AR	1995
Pine Bluff Sand and Gravel Co.	River Mountain	Delaware, AR	1996
Seminole Ag-Lime Co.	Seminole	Dexter, MO	1996
Tower Rock Stone Co.	Bussen	Ste. Genevieve, MO	1995
Tower Rock Stone Co.	Grays Point	Scott City, MO	1995
Vulcan Materials	Gilbertsville	Lake City, KY	1996
Vulcan Materials	Parsons	Parsons, TN	1996
Vulcan Materials	Verkler	Black Rock, AR	1996

b. Stone may be furnished either from any of the listed sources or from any other sources designated by the Contractor and accepted by the Contracting Officer, subject to the conditions hereinafter stated.

c. After the award of the contract, the Contractor shall designate in writing only one source or one combination of sources from which he proposes to furnish stone. If the Contractor proposes to furnish stone from a source or sources not listed above, he may designate only a single additional source for stone. Samples for acceptance testing shall be provided as required in the

Technical Specifications. If a source for stone so designated by the Contractor is not accepted by the Contracting Officer for use, the Contractor may not propose other sources but shall furnish the stone from a listed source at no additional cost to the Government.

d. Acceptance of a source of stone shall not be construed as acceptance of all material from that source. The right is reserved to reject materials from certain localized areas, zones, strata, or channels, when such materials are unsuitable for stone as determined by the Contracting Officer. Materials produced from a listed source shall meet all the requirements of the Technical Specifications.

1.31. FIELD OFFICE BUILDING.

a. The Contractor shall furnish and maintain a temporary building for the exclusive use of the Government inspectors during the life of the contract. The building shall conform to the following requirements:

Floor Space	Not less than 150 sq. ft.
Height of Ceiling	Not less than 7 feet
Windows	Not less than 4
Doors	At least 1
Type of Floor	Wood or Concrete

The building shall be of light but weatherproof construction. Windows shall be arranged to open and to be fastened from the inside. All door and window openings shall be provided with suitable screens. The door shall be equipped with a durable hasp and padlock. Interior surfaces of exterior walls and ceilings shall be covered with insulating board and an inside storage room of adequate size shall be provided. The Contractor shall furnish an adequate supply of approved drinking water, sufficient electrical outlets for office calculators and equipment, adequate toilet facilities, all electricity required and sufficient fixtures for adequate lighting, and during cold weather shall furnish adequate heat. The field office, its location and all facilities shall be subject to the approval of the Contracting Officer. The building shall also be equipped with air conditioning during hot weather. The office shall be equipped with at least 2 chairs and one desk.

b. No separate payment will be made for furnishing and maintaining the field office. Such building will remain the property of the Contractor and shall be removed upon completion of the work as provided in the CONTRACT CLAUSE entitled "Operations and Storage Areas".

1.32. THRU 1.33. NOT USED.

1.34. TEMPORARY PROJECT FENCING. Temporary project fencing as required by Paragraph 04.A.04 of EM 385-1-1 is not required on this project.

1.35. THRU 1.37. NOT USED.

1.38. SUNDAY, HOLIDAY AND NIGHT WORK. Sunday and Holiday work will be at the option of the Contractor, but night work will not be permitted unless otherwise authorized by the Contracting Officer.

1.39. THRU 1.40. NOT USED.

1.41. STORAGE OF EQUIPMENT AND MATERIALS. Storage of the Contractor’s equipment and materials shall be at those areas within the rights-of-way designated by the Contracting Officer.

1.42. WARRANTY OF CONSTRUCTION (MAR 1994).

a. In addition to any other warranties in this contract, the Contractor warrants, except as provided in paragraph i. of this clause, that work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, or design furnished, or workmanship performed by the Contractor or any subcontractor or supplier at any tier.

b. This warranty shall continue for a period of 1 year from the date of final acceptance of the work. If the Government takes possession of any part of the work before final acceptance, this warranty shall continue for a period of 1 year from the date the Government takes possession.

c. The Contractor shall remedy at the Contractor's expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to Government-owned or controlled real or personal property, when that damage is the result of--

(1) The Contractor's failure to conform to contract requirements; or

(2) Any defect of equipment, material, workmanship, or design furnished.

d. The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for 1 year from the date of repair or replacement.

e. The Contracting Officer shall notify the Contractor, in writing, within a reasonable time after the discovery of any failure, defect, or damage.

f. If the Contractor fails to remedy any failure, defect, or damage within a reasonable time after receipt of notice, the Government shall have the right to replace, repair, or other-wise remedy the failure, defect, or damage at the Contractor's expense.

g. With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall--

(1) Obtain all warranties that would be given in normal commercial practice;

(2) Require all warranties to be executed, in writing, for the benefit of the Government, if directed by the Contracting Officer; and

(3) Enforce all warranties for the benefit of the Government, if directed by the Contracting Officer.

h. In the event the Contractor's warranty under paragraph (b) of this clause has expired, the Government may bring suit at its expense to enforce a subcontractor's, manufacturer's, or supplier's warranty.

i. Unless a defect is caused by the negligence of the Contractor or subcontractor or supplier at any tier, the Contractor shall not be liable for the repair of any defects of material or design furnished by the Government nor for the repair of any damage that results from any defect in Government-furnished material or design.

j. This warranty shall not limit the Government's rights under the Inspection and Acceptance clause of this contract with respect to latent defects, gross mistakes, or fraud. (FAR 52.246-21)

1.43. UTILITY SERVICES. The Contractor shall provide at the site for all work under this contract, the necessary utility services needed for completion of work under this contract.

1.44. COMMERCIAL WARRANTY. The Contractor agrees that the building and construction materials and building hardware furnished under this contract shall be covered by the most favorable commercial warranty the Contractor gives to any customer for such products and that the rights and remedies provided herein are in addition to and do not limit any rights afforded to the Government by any other clause of this contract. The warranty will take effect immediately after compliance by the Contractor of these specifications, and acceptance of the completed work by the Government.

1.45. PAYMENT FOR MATERIAL STORED OFFSITE.

a. In the preparation of monthly progress payment estimates, the Contracting Officer, upon request from the Contractor and in compliance with other criteria as hereinafter stated, will authorize payment, subject to availability of funds, for materials delivered to the Contractor at locations other than the site for the following items:

(1) Precast Concrete Deck Units.

(2) Piling: Concrete, Precast, Prestressed.

b. The following criteria must be satisfied before the prescribed payment will be approved.

(1) The Contractor shall furnish written evidence that he holds title to the material.

(2) The Contractor shall furnish evidence of the value of the materials.

(3) The materials shall have prior approval for incorporation into the work, i.e., required shop drawings, certificates of compliance, etc., must have been submitted and final approval action taken.

(4) The materials must be properly stored to the satisfaction of the Contracting Officer.

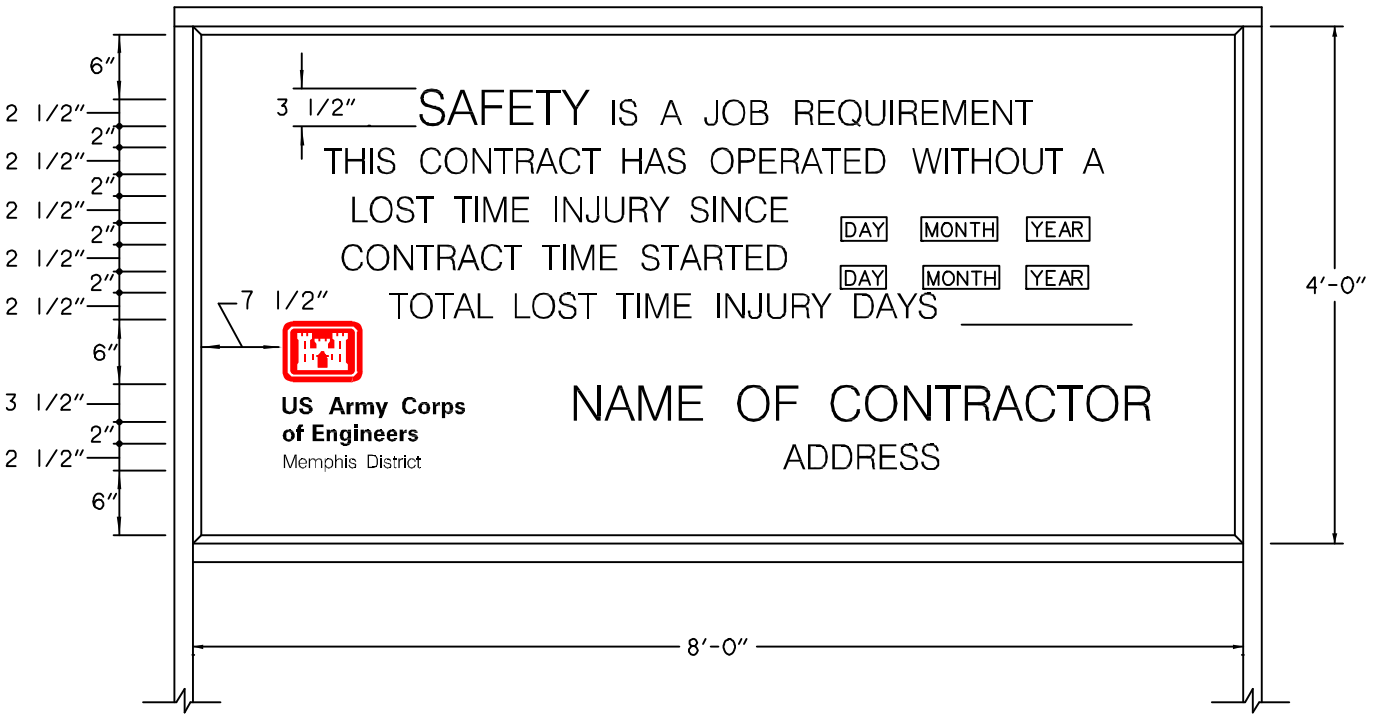
c. Other materials having a value exceeding $5,000.00 and delivered to the Contractor at locations other than the site may be considered for payment at the sole discretion of the Contracting Officer.

1.46 THRU 1.58 NOT USED.

1.59. DESIGNATED BILLING OFFICE. The designated billing office for this contract shall be Caruthersville Area Office, 706 Harry S. Truman Blvd., Caruthersville, Missouri, 63830-1268.

1.60 NOT USED.

-- End of Section --



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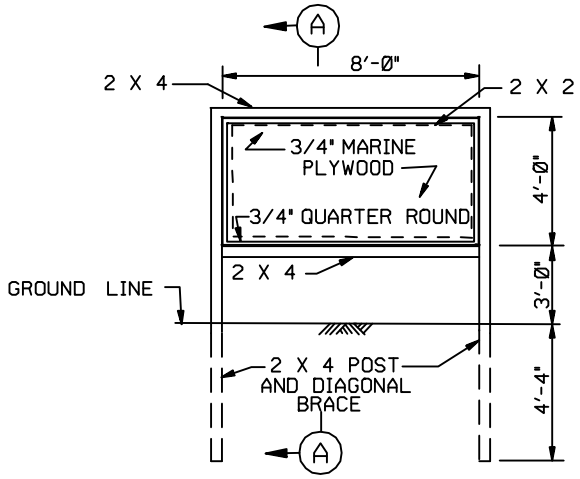

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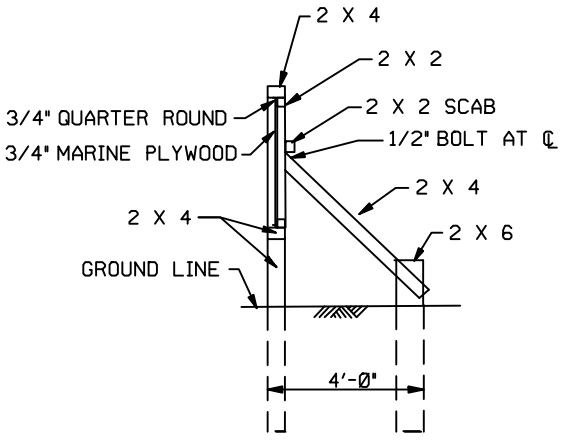

SECTION A-A

NOTES:

1. CONTRACTOR SHALL CONSTRUCT AND MAINTAIN A DURABLE SIGN AS SHOWN.
2. WOOD IN CONTACT WITH GROUND SHALL BE TREATED LUMBER.
3. ALL EXPOSED SURFACES SHALL BE WHITE HOUSE PAINT.
4. LETTERING SHALL BE BLACK.
5. ENGINEER CASTLE DECAL FURNISHED BY GOVERNMENT.
6. 22 GA. SHEET METAL MAY BE USED IN LIEU OF PLYWOOD.

US Army Corps of Engineers
Memphis District

ENGINEER CASTLE DETAIL

SCALE: NONE MARCH 1995

U.S. ARMY ENGINEER DISTRICT, MEMPHIS
CORPS OF ENGINEERS
MEMPHIS, TENNESSEE

SAFETY SIGN

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SECTION 01025

MEASUREMENT AND PAYMENT

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SECTION 01025

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.1 LUMP SUM PAYMENT ITEMS

1.1.1 General

Payment items for the work of this contract for which contract lump sum payments will be made are listed in the BIDDING SCHEDULE and described below. All costs for items of work, which are not specifically mentioned to be included in a particular lump sum or unit price payment item, shall be included in the listed lump sum item most closely associated with the work involved. The lump sum price and payment made for each item listed shall constitute full compensation for furnishing all plant, labor, materials, and equipment, and performing any associated Contractor Quality Control, meeting safety requirements, tests and reports, and for performing all work required for which separate payment is not otherwise provided.

(1) "Clearing and Grubbing"

a. Payment for clearing, grubbing, and bridge removal will be made at the contract lump sum price for "Clearing and Grubbing", which price and payment shall constitute full compensation for clearing and grubbing, disposal of cleared and grubbed materials including existing roadway and bridge refill of grubbing holes, and performing all operations incidental thereto; all as specified in SECTION 02110.

b. Unit of measure, Lump Sum: LS.

(2) "Excavation"

a. Payment for excavation will be made at the contract lump sum price for "Excavation", which price and payment shall constitute full compensation for furnishing all material and equipment and performing all labor for excavation; disposal of excess excavated materials in the disposal areas; and all other operations incidental thereto all as specified in Section 02225.

b. Unit of measure, Lump Sum: LS.

(3) "Roadway, Field Road and Field Access Ramp Embankments"

a. Payment for embankments will be made at the contract lump sum price for "Roadway, Field Road and Field Access Ramp Embankments", which price and payment shall constitute full compensation for furnishing all materials and equipment and performing all labor for furnishing and constructing embankment, and all other operations incidental thereto, all as specified in Section 02225.

b. Unit of measure, Lump Sum: LS.

(4) “Aggregate Surfacing”

a. Payment for aggregate surfacing will be made at the contract lump sum price for “Aggregate Surfacing”, which price and payment shall constitute full compensation for furnishing all material and equipment and

performing all labor for placing six inches compacted thickness of aggregate surfacing; and all other operations incidental thereto; all as specified in SECTION 02546.

b. Unit of measure; Lump Sum: LS.

(5) “Finish Dressing, Fertilizing, Seeding, and Mulching”

a. Payment for finish dressing, fertilizing, seeding, and mulching will be made at the contract lump sum price for "Finish Dressing, Fertilizing, Seeding, and Mulching", which price and payment shall constitute full compensation for finish dressing, fertilizing, seeding, and mulching all as specified in Section 02935.

b. Unit of measure, Lump Sum: LS.

(6) “Grout for Riprap”

a. Payment for grout for riprap will be made at the contract lump sum price for “Grout for Riprap”, which price and payment shall constitute full compensation for furnishing all labor, equipment, materials, batching; transporting, placing, curing, and performing all other operations incidental thereto, all as specified in SECTION 02542.

b. Unit of measure,Lump Sum: LS.

(7) “Cast-in-Place Structural Concrete”

a. Payment for furnishing “Cast-in-Place Structural Concrete” will be made at the contract lump sum price, which price and payment shall constitute full compensation for furnishing and performing all operations incidental thereto; all as specified in SECTION 03300 and SECTION 03440.

b. Unit of measure,Lump Sum: LS.

(8) "Guardrail"

a. Payment

Payment for guard rail will be made at the contract lump sum price for "Guardrail," which price and payment shall constitute full compensation for installation of the guard rail, and performing all operations incidental thereto; all as specified in SECTION 05500.

b. Unit of measure,Lump Sum: LS.

(9) "Environmental Protection"

a. Payment will be made for costs associated with operations necessary for "Environmental Protection" as specified in Section 01130.

b. Unit of measure,Lump Sum: LS.

(10) “Bridge at Mile 4.03”

a. Payment for bridge at Mile 4.03 will be made at the contract lump sum price for “Bridge at Mile 4.03” which price and payment shall include all work under the contract which is not included in payment for Items 0001 through 0014 of the Bidding Schedule unless otherwise specified.

b. Unit of measure,Lump Sum: LS.

1.2 UNIT PRICE PAYMENT ITEMS

1.2.1 General

Payment items for the work under this contract for which the contract progress payments will be based are listed in the BIDDING SCHEDULE and described below. The unit price and payment made for each item listed shall constitute full compensation for furnishing all plant, labor, materials, and equipment, and performing any associated Contractor quality control, meeting safety requirements, tests and reports, and for performing all work required for each of the unit price items.

(1) "Filter Material”

a. Payment for filter material will be made at the contract unit price per ton for “Filter Material”, which price and payment shall constitute full compensation for furnishing all materials and equipment and performing all labor for installing filter material; and all operations incidental; thereto, all as specified in SECTION 02542 STONE PROTECTION.

b. The filter material will be measured for payment by the ton.

c. Unit of Measure, ton: TN.

(2) "Riprap"

a. Payment for riprap will be made at the Contract unit price per ton for "Riprap”, which price and payment shall constitute full compensation for furnishing all materials and equipment and performing all labor for installing riprap; and all operations incidental; thereto, all as specified in SECTION 02542 STONE PROTECTION.

b. Riprap will be measured for payment by the ton.

c. Unit of Measure, ton: TN.

(3) "Concrete Piling, Precast, Prestressed, 14-inch Square"

a. Payment for each pile acceptably driven will be made at the contract unit price per linear foot for "Concrete Piling, Precast, Prestressed, 14-inch Square ", as determined by the length of pile specified or directed to be driven, which price and payment shall include all items incidental to furnishing and driving the piles, redriving uplifted piles, authorized splices and cutting-off any piles with their tops not driven to cut-off grade unless driving to a higher elevation has been specifically authorized all as specified in Section 03430.

Payment for cut-offs will be made for the measured cut-off portion of any pile at the rate of 50 percent of the contract unit price of the pile, and no other payment will be made for such cut-off all as defined in Section 03430.

Payment for piles which are pulled, at the direction of the Contracting Officer, and found to be in good condition will be paid for at the contract unit price for furnishing and driving the pile in its original position plus an equitable amount for the cost of pulling. Such pulled piles when redriven will be paid for at 50 percent of the contract unit price for furnishing and driving the measured length of pile redriven, which price shall constitute payment for redriving. When piles are pulled and found to be damaged, no payment will be made for originally furnishing and driving such piles, nor for the cost of pulling. They shall be replaced by new piles, which will be paid for at the

contract unit price for the lengths driven all as specified in Section 03430.

b. Precast concrete piles will be measured for payment on the basis of lengths along the axis of the pile in place at or below the cut-off elevation. The cut-off portion of any pile will be measured for payment on the basis of the difference between the length specified and the length driven below cut-off elevation.

c. Unit of measure, linear feet: LF.

(4) “Corrugated Metal Pipe, 24-inch”

a. Measurement

The culverts will be measured for payment by the linear foot. Such measurement will be made in the field and will be based on the length installed as determined and approved by the Contracting Officer.

b. Payment

Payment for the culverts will be made at the contract unit price per linear foot for “Corrugated Metal Pipe, 24-inch”, which price and payment shall constitute full compensation for furnishing and installing the culverts; incidental excavation required for the removal of the existing culverts and installation of the new culverts; backfilling around and over the culverts; disposition of the existing culverts; and all other operations incidental thereto; all as specified in SECTION 02700 and as applicable to each individual culvert.

c. Unit of measurement, linear foot: LF.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION (Not Used)

-- End of Section --

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01130

ENVIRONMENTAL PROTECTION

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SECTION 01130

ENVIRONMENTAL PROTECTION

PART 1 GENERAL

1.1 DEFINITIONS

For the purpose of this specification, environmental pollution and damage is defined as the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to man; or degrade the utility of the environment for aesthetic, cultural and/or historical purposes. The control of environmental pollution and damage requires consideration of air, water, and land, and includes management of visual aesthetics, noise, solid waste, radiant energy and radioactive materials, as well as other pollutants.

1.2 ENVIRONMENTAL PROTECTION REQUIREMENTS

Provide and maintain, during the life of the contract, environmental protection. Plan for and provide environmental protective measures to control pollution that develops during normal construction practice. Plan for and provide environmental protective measures required to correct conditions that develop during the construction of permanent or temporary environmental features associated with the project. Comply with Federal, State, and local regulations pertaining to the environment, including but not limited to water, air, and noise pollution.

1.2.1 Environmental Protection Plan

Within 21 days after receipt of Notice of Award of the contract, the Contractor shall submit in writing an Environmental Protection Plan and, prior to starting work, meet with representatives of the Contracting Officer to develop mutual understanding relative to compliance with this provision and administration of the environmental protection program. Approval of the Contractor’s plan will not relieve the Contractor of his responsibility for adequate and continuing control of pollutants and other environmental protection measures. The Government reserves the right to make changes in his environmental protection plan and operations as necessary to maintain satisfactory environmental protection performance. The Environmental Protection Plan shall include but not be limited to the following:

1.2.1.1 Protection of Features

The Contractor shall determine methods for the protection of features to be preserved within authorized work areas. The Contractor shall prepare a listing of methods to protect resources needing protection, i.e., trees, shrubs, vines, grasses and ground cover, landscape features, air and water quality, fish and wildlife, soil, historical, archaeological and cultural resources.

1.2.1.2 Procedures

The Contractor shall implement procedures to provide the required environmental protection and to comply with the applicable laws and regulations. The Contractor shall set out the procedures to be followed to correct pollution of the environment due to accident, natural causes or failure to follow the procedures set out in accordance with the Environmental Protection Plan.

1.2.1.3 Permit or License

The Contractor shall obtain all needed permits or licenses.

1.2.1.4 Drawings

The Contractor shall include drawings showing locations of any proposed temporary excavations or embankments for haul roads, stream crossings, material storage areas, structures, sanitary facilities, stockpiles of earth materials, and disposal areas for excess earth material and unsatisfactory earth materials.

1.2.1.5 Environmental Monitoring Plans

The Contractor shall include environmental monitoring plans for the job site which incorporate land, water, air and noise monitoring.

1.2.1.6 Traffic Control Plan

The Contractor shall include a traffic control plan for the job site.

1.2.1.7 Surface and Ground Water

The Contractor shall establish methods of protecting surface and ground water during construction activities.

1.2.1.8 Work Area Plan

The Contractor shall include a work area plan showing the proposed activity in each portion of the area and identifying the areas of limited use or nonuse. The plan shall include measures for marking the limits of use areas.

1.3 SUBCONTRACTORS

Assurance of compliance with this section by subcontractors will be the responsibility of the Contractor.

1.4 PERMITS OBTAINED BY CORPS OF ENGINEERS

The Corps of Engineers will not obtain any permits for this project. See Contract Clause entitled "PERMITS AND RESPONSIBILITIES".

1.5 REGULATORY REQUIREMENTS

The Contractor shall comply with all state regulatory and statutory requirements.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 PROTECTION OF ENVIRONMENTAL RESOURCES

The environmental resources within the project boundaries and those affected outside the limits of permanent work under this contract shall be protected during the entire period of this contract. The Contractor shall confine his activities to areas defined by the contract drawings or specifications. Environmental protection shall be as stated in the following subparagraphs.

3.1.1 Protection of Land Resources

Prior to the beginning of any construction, the Contracting Officer will identify all land resources to be preserved within the Contractor's work area. The Contractor shall not remove, cut, deface, injure, or destroy land resources including trees, shrubs, vines, grasses, top soil, and land forms without special permission from the Contracting Officer. No ropes, cables, or guys shall be fastened to or attached to any trees for anchorage unless specifically authorized. Where such special emergency use is permitted, the Contractor shall provide effective protection for land and vegetation resources at all times as defined in the following subparagraphs.

3.1.1.1 Work Area Limits

Prior to any construction, the Contractor shall mark the areas where no work is to be performed under this contract. Isolated areas within the general work area which are to be saved and protected shall also be marked or fenced. Monuments and markers shall be protected before construction operations commence and during all construction operations. Where construction operations are to be conducted during darkness, the markers shall be visible during darkness. The Contractor shall convey to his personnel the purpose of marking and/or protection of all necessary objects.

3.1.1.2 Protection of Landscape

Trees, shrubs, vines, grasses, land forms and other landscape features to be preserved, indicated and defined on the drawings submitted by the Contractor as a part of the Environmental Protection Plan, shall be clearly identified by marking, fencing, or wrapping with boards, or any other approved techniques.

3.1.1.3 Reduction of Exposure of Unprotected Erodible Soils

Earthwork brought to final grade shall be finished as indicated and specified. Side slopes and back slopes shall be protected as soon as practicable upon completion of rough grading. All earthwork shall be planned and conducted to minimize the duration of exposure of unprotected soils. Except in instances where the constructed feature obscures borrow areas, quarries and waste material areas, these areas shall not initially be cleared in total. Clearing of such areas shall progress in reasonably sized increments as needed to use the areas as approved by the Contracting Officer.

3.1.1.4 Temporary Protection of Disturbed Areas

Such methods as necessary shall be utilized to effectively prevent erosion and control sedimentation, including but not limited to the following:

a. Retardation and Control of Runoff

Runoff from the construction site shall be controlled by construction of diversion ditches, benches, and berms to retard and divert runoff to protected drainage courses, and the Contractor shall also utilize any measures required by area-wide plans approved under Paragraph 208 of the Clean Water Act.

3.1.1.5 Erosion and Sedimentation Control Devices

The Contractor shall construct or install all temporary and permanent erosion sedimentation control features. Temporary erosion and sediment control measures such as berms, dikes, drains, sedimentation basin, grassing and mulching shall be maintained until permanent drainage and erosion control facilities are completed and operable.

3.1.1.6 Location of Contractor Facilities

The Contractor’s field offices, staging areas, stockpiles, storage, and temporary buildings shall be placed in areas approved by the Contracting Officer. Temporary movement or relocation of Contractor facilities shall be made only on approval by the Contracting Officer.

3.1.1.7 Disposal Areas on Government Property

Disposal areas on Government property shall be managed and controlled to limit material to areas designated on the contract drawings and prevent erosion of soil or sediment from entering nearby water courses or lakes. Disposal areas shall be developed in accordance with the grading plan indicated on the contract drawings.

3.1.1.8 Temporary Excavation and Embankments

Temporary excavation and embankments shall be controlled to protect adjacent areas from contamination.

3.1.1.9 Disposal of Solid Wastes

Solid wastes (excluding clearing debris) shall be placed in containers which are emptied on a regular schedule. All handling and disposal shall be conducted to prevent contamination. The Contractor shall transport all solid waste off Government property and dispose of it in compliance with Federal, State, and local requirements for solid waste disposal.

3.1.1.10 Disposal of Chemical Wastes

Chemical wastes shall be stored in corrosion resistant containers, removed from the work area and disposed of in accordance with Federal, State, and local regulations.

3.1.1.11 Disposal of Discarded Materials

Discarded materials other than those which can be included in the solid waste category shall be handled as directed by the Contracting Officer.

3.2 HISTORICAL, ARCHAEOLOGICAL AND CULTURAL RESOURCES

Existing historical, archaeological and cultural resources within the Contractor’s work area will be so designated by the Contracting Officer and precautions shall be taken by the Contractor to preserve all such resources as they existed at the time they were pointed out to the Contractor. The Contractor shall install all protection for these resources so designated on the contract drawings and shall be responsible for their preservation during this contract. If during construction items of apparent archaeological or historical interest are discovered, they shall be left undisturbed and the Contractor shall report the find immediately to the Contracting Officer.

3.3 PROTECTION OF WATER RESOURCES

The Contractor shall keep construction activities under surveillance, management and control to avoid pollution of surface and ground waters. Special management techniques as set out below shall be implemented to control water pollution by the listed construction activities which are included in this contract.

3.3.1 Cofferdam and Diversion Operations

The Contractor shall plan his operations and perform all work necessary to minimize adverse impact or violation of the water quality standard. Construction operations for dewatering, removal of cofferdams, tailrace excavation, and tunnel closure shall be controlled at all times to limit impact of water turbidity on the habitat for wildlife and impacts on water quality for downstream use.

3.3.2 Stream Crossings

Stream crossings shall be controlled during construction. Crossings shall not violate water pollution control standards of the Federal, State or local government.

3.3.3 Monitoring of Water Areas Affected by Construction Activities

Monitoring of water areas affected by construction activities shall be the responsibility of the Contractor. All water areas affected by construction activities shall be monitored by the Contractor.

3.4 PROTECTION OF FISH AND WILDLIFE RESOURCES

The Contractor shall keep construction activities under surveillance, management and control to minimize interference with, disturbance to and damage of fish and wildlife. Species that require specific attention shall be listed by the Contractor prior to beginning of construction operations.

3.5 PROTECTION OF AIR RESOURCES

The Contractor shall keep construction activities under surveillance, management and control to minimize pollution of air resources. All activities, equipment, processes, and work operated or performed by the Contractor in accomplishing the specified construction shall be in strict accordance with the laws of the State or States in which the work is being performed and all Federal emission and performance laws and standards. Special management techniques as set out below shall be implemented to control air pollution by the construction activities which are included in the contract.

3.5.1 Particulates

Dust particles, aerosols, gaseous by-products from all construction activities, processing and preparation of materials, such as from asphaltic batch plants, shall be controlled at all times, including weekends, holidays and hours when work is not in progress. The Contractor shall maintain all excavations, stockpiles, haul roads, permanent and temporary access roads, plant sites, spoil areas, borrow areas, and all other work areas within or outside the project boundaries free from particulates which would cause the air pollution standards mentioned in the paragraph "PROTECTION OF AIR RESOURCES" to be exceeded or which would cause a hazard or a nuisance. Sprinkling, chemical treatment of an approved type, light bituminous treatment, baghouse, scrubbers, electrostatic precipitators or other methods will be permitted to control particulates in the work area. Sprinkling, to be efficient, must be repeated at such intervals as to keep the disturbed area damp at all times. The Contractor must have sufficient competent equipment available to accomplish this task. Particulate control shall be performed as the work proceeds and whenever a particulate nuisance or hazard occurs.

3.5.2 Hydrocarbons and Carbon Monoxide

Hydrocarbons and carbon monoxide emissions from equipment shall be controlled to Federal and State allowable limits at all times.

3.5.3 Odors

Odors shall be controlled at all times for all construction activities, processing and preparation of materials.

3.5.4 Monitoring Air Quality

Monitoring of air quality shall be the responsibility of the Contractor. All air areas affected by the construction activities shall be monitored by the Contractor.

3.6 INSPECTION

The Contracting Officer will notify the Contractor in writing of any observed noncompliance with the Contractor's environmental protection plan. The Contractor shall, after receipt of such notice, inform the Contracting Officer of proposed corrective action and take such action as may be approved. If the Contractor fails to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No time extensions will be granted or costs or damages allowed to the Contractor for any such suspension.

3.7 POST CONSTRUCTION CLEANUP

The Contractor shall clean up all area(s) used for construction.

3.8 RESTORATION OF LANDSCAPE DAMAGE

The Contractor shall restore all landscape features damaged or destroyed during construction operations outside the limits of the approved work areas. Such restoration shall be in accordance with the plans submitted for approval by the Contracting Officer.

3.9 MAINTENANCE OF POLLUTION FACILITIES

The Contractor shall maintain all constructed facilities and temporary pollution control devices for the duration of the contract or for that length of time construction activities create the particular pollutant.

3.10 TRAINING OF CONTRACTOR PERSONNEL IN POLLUTION CONTROL

The Contractor shall train his personnel in all phases of environmental protection. The training shall include methods of detecting and avoiding pollution, familiarization with pollution standards, both statutory and contractual, and installation and care of facilities (vegetative covers and instruments required for monitoring purposes) to insure adequate and continuous environmental pollution control.

-- End of Section --

DIVISION 1 – GENERAL REQUIREMENTS

SECTION 01330

SUBMITTAL PROCEDURES

TABLE OF CONTENTS

SECTION 01330

SUBMITTAL PROCEDURES

PART 1 GENERAL

1.1 SUBMITTAL IDENTIFICATION

SD-01 Data

SD-04 Drawings

SD-06 Instructions

SD-07 Schedules

SD-08 Statements

SD-09 Reports

SD-13 Certificates

SD-14 Samples

SD-18 Records

SD-19 Operation and Maintenance Manuals

1.2 SUBMITTAL CLASSIFICATION

Submittals are classified as follows:

1.2.1 Government Approved

Governmental approval is required for extensions of design, critical materials, deviations, equipment whose compatibility with the entire system must be checked, and other items as designated by the Contracting Officer. Within the terms of the Contract Clause entitled "Specifications and Drawings for Construction," they are considered to be "shop drawings."

1.2.2 Information Only

All submittals not requiring Government approval will be for information only. They are not considered to be "shop drawings" within the terms of the Contract Clause referred to above.

1.3 APPROVED SUBMITTALS

The Contracting Officer’s approval of submittals shall not be construed as a complete check, but will indicate only that the general method of construction, materials, detailing and other information are satisfactory. Approval will not relieve the Contractor of the responsibility for an error that may exist, as the Contractor is responsible for dimensions, the design of adequate connections and details, and the satisfactory construction of all work. After submittals have been approved by the Contracting Officer, resubmitting for the purpose of substituting materials or equipment will not be considered unless accompanied by an explanation of why a substitution is necessary.

1.4 DISAPPROVED SUBMITTALS

The Contractor shall make all corrections required by the Contracting Officer and promptly furnish a corrected submittal in the form and number of copies specified for the initial submittal. If the Contractor considers any correction indicated on the submittals to constitute a change to the contract, a notice in accordance with the Contract Clause "Changes" shall be given promptly to the Contracting Officer.

1.5 WITHHOLDING OF PAYMENT

Payment for materials incorporated in the work will not be made if required approvals have not been obtained.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 GENERAL

The Contractor shall make submittals as required by the specifications. The Contracting Officer may request submittals in addition to those specified when deemed necessary to adequately describe the work covered in the respective sections. Units of weights and measures used on all submittals shall be the same as those used in the contract drawings. Each submittal shall be complete and in sufficient detail to allow ready determination of compliance with contract requirements. Prior to submittal, all items shall be checked and approved by the Contractor’s Quality Control (CQC) representative and each item shall be stamped, signed, and dated by the CQC representative indicating action taken. Proposed deviations from the contract requirements shall be clearly identified. Submittals shall include items such as: Contractor’s, manufacturer’s, or fabricator’s drawings; descriptive literature including (but not limited to) catalog cuts, diagrams, operating charts or curves; test reports; test cylinders; samples; O&M manuals (including parts list); certifications; warranties; and other such required submittals. Submittals requiring Government approval shall be scheduled and made prior to the acquisition of the material or equipment covered thereby. Samples remaining upon completion of the work shall be picked up and disposed of in accordance with manufacturer’s Material Safety Data Sheets (MSDS) and in compliance with existing laws and regulations.

3.2 SUBMITTAL REGISTER (ENG FORM 4288R)

At the end of this section is one set of ENG Form 4288R listing items of

equipment and materials for which submittals are required by the specifications; this list may not be all inclusive and additional submittals may be required. The Contracting officer will give the Contractor the submittal register as a diskette containing the computerized ENG Form 4288R and instructions on the use of the diskette. Columns "d" through "q" have been completed by the Government; the Contractor shall complete columns "a" and "r" through "t" and submit the forms (hard copy plus associated electronic file) to the Contracting Officer for approval within 15 calendar days after Notice to Proceed. The Contractor shall keep this diskette up-to-date and shall submit it to the Government together with the monthly payment request. The approved submittal register will become the scheduling document and will be used to control submittals throughout the life of the contract. The submittal register and the progress schedules shall be coordinated.

3.3 SCHEDULING

Submittals covering component items forming a system or items that are interrelated shall be scheduled to be coordinated and submitted concurrently. Certifications to be submitted with the pertinent drawings shall be so scheduled. Adequate time (15 calender days for FIO submittals; 30 calender days for GA submittals and re-submittals; 45 calender days for submittals requesting variation or deviation from contract requirements) shall be allowed and shown on the register for review and approval. No delay damages or time extensions will be allowed for time lost in late submittals.

3.4 TRANSMITTAL FORM (ENG FORM 4025R)

The sample transmittal form (ENG Form 4025R) attached to this section shall be used for submitting both Government approved and information only submittals in accordance with the instructions on the reverse side of the form. These forms will be furnished to the Contractor. This form shall be properly completed by filling out all the heading blank spaces and identifying each item submitted. Special care shall be exercised to ensure proper listing of the specification paragraph and/or sheet number of the contract drawings pertinent to the data submitted for each item.

3.5 SUBMITTAL PROCEDURE

Submittals shall be made as follows:

3.5.1 Procedures

Submittals shall be prepared as specified with the required number of copies and delivered to:

U.S. Army Corps of Engineers
Caruthersville Area Office
709 Harry S. Truman Blvd.
Caruthersville, Missouri 63830-1268

3.5.2 Deviations

For submittals which include proposed deviations requested by the Contractor, the column "variation" of ENG Form 4025R shall be checked. The Contractor shall set forth in writing the reason for any deviations and annotate such deviations on the submittal. The Government reserves the right to rescind inadvertent approval of submittals containing unnoted deviations.

3.6 CONTROL OF SUBMITTALS

The Contractor shall carefully control his procurement operations to ensure that each individual submittal is made on or before the Contractor scheduled submittal date shown on the approved "Submittal Register."

3.7 GOVERNMENT APPROVED SUBMITTALS

Upon completion of review of submittals requiring Government approval, the submittals will be identified as having received approval by being so stamped and dated. Four copies of the submittal will be retained by the Contracting Officer and two (2) copies of the submittal will be returned to the Contractor.

3.8 INFORMATION ONLY SUBMITTALS

Normally submittals for information only will not be returned. Approval of the Contracting Officer is not required on information only submittals. The Government reserves the right to require the Contractor to resubmit any item found not to comply with the contract. This does not relieve the Contractor from the obligation to furnish material conforming to the plans and specifications; will not prevent the Contracting Officer from requiring removal and replacement of nonconforming material incorporated in the work; and does not relieve the Contractor of the requirement to furnish samples for testing by the Government laboratory or for check testing by the Government in those instances where the technical specifications so prescribe.

3.9 STAMPS

Stamps used by the Contractor on the submittal data to certify that the submittal meets contract requirements shall be similar to that shown on:

CONTRACTOR
(Firm Name)

_____ Approved

_____ Approved with corrections as noted on submittal data and/or attached sheets(s)

SIGNATURE: _____
TITLE: _____
DATE: _____

End of Section

TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES OR MANUFACTURE'S CERTIFICATES OF COMPLIANCE (Read instructions on the reverse side prior to initiating this form)	DATE	TRANSMITTAL NO.

SECTION I - REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS (This section will be initiated by the contractor)

TO:	FROM	CONTRACT NO.	CHECK ONE: [ ] THIS IS A NEW TRANSMITTAL [ ] THIS IS A RESUBMITTAL OF TRANSMITTAL _____
SPECIFICATION SECT. NO. (Cover only one section with each transmittal)	PROJECT TITLE AND LOCATION		CHECK ONE: THIS TRANSMITTAL IS FOR [ ] FIO [ ] GOV''T APPROVAL

ITEM NO.	DESCRIPTION OF ITEM SUBMITTED (Type size, model number/etc.)	MFG OR CONTR. CAT., CURVE DRAWING OR BROCHURE NO. (See instruction no. 8)	NO. OF COPIES	CONTRACT REFERENCE DOCUMENT		FOR CONTRACTOR USE CODE	VARIATION (See Instruction No. 6)	FOR CE USE CODE
				SPEC. PARA NO.	DRAWING SHEET NO.			
a.	b.	c.	d.	e.	f.	g.	h.	i.

REMARKS	I certify that the above submitted items have been reviewed in detail and are correct and in strict conformance with the contract drawings and specifications except as otherwise stated. _____ NAME AND SIGNATURE OF CONTRACTOR

SECTION II - APPROVAL ACTION

ENCLOSURE RETURNED (Listed by Item No.)	NAME, TITLE AND SIGNATURE OF APPROVING AUTHORITY	DATE

1. Section 1 will be initiated by the Contractor in the required number of copies.

2. Each transmittal shall be numbered consecutively in the space provided for "Transmittal No.". This number, in addition to the contract number, will form a serial number for identifying each submittal. For new submittals or resubmittals, mark the appropriate box; on resubmittals, insert transmittal number of last submission as well as the new submittal number.

3. The "Item No." will be the same "Item No." as indicated on ENG FORM 4288 for each entry on this form.

4. Submittals requiring expeditious handling will be submitted on a separate form.

5. Separate transmittal form will be used for submittals under separate sections of the specifications.

6. A check shall be placed in the "Variation" column when a submittal is not in accordance with the plans and specifications--also, a written statement to that effect shall be included in the space provided for "Remarks".

7. Form is self-transmittal, letter of transmittal is not required.

8. When a sample of material or Manufacturer's Certificate of Compliance is transmitted, indicate "Sample" or "Certificate" in column c, Section I.

9. U.S. Army Corps of Engineers approving authority will assign action codes as indicated below in space provided in Section I, column i to each item submitted. In addition they will ensure enclosures are indicated and attached to the form prior to return to the contractor. The Contractor will assign action codes as indicated below in Section I, column g, to each item submitted.

THE FOLLOWING ACTION CODES ARE GIVEN TO ITEMS SUBMITTED

A	--	Approved as submitted.	E	--	Disapproved (See attached).
B	--	Approved, except as noted on drawings.	F	--	Receipt acknowledge.
C	--	Approved, except as noted on drawings. Refer to attached sheet resubmission required.	FX	--	Receipt acknowledged, does not comply as noted with contract requirements.
D	--	Will be returned by separate correspondence.	G	--	Other *(Specify)*

10. Approval of items does not relieve the contractor from complying with all the requirements of the contract plans and specifi cations.

SUBMITTAL REGISTER (ER 415-1-10)																								CONTRACT NO.		
TITLE AND LOCATION				DITCH NO. 1 AND DITCH NO. 6 COUNTY BRIDGE MILE 4.03 PEMISCOT COUNTY, MISSOURI											CONTRACTOR									SPECIFICATION SECTION 02225		
					TYPE OF SUBMITTAL									CLASSI-FICATION			CONTRACTOR SCHEDULE DATES			CONTRACTOR ACTION			GOVERNMENT ACTION		
ACTIVITY NO. a	TRANS-MITTAL NO. b	ITEM NO. c	SPECIFICATION PARAGRAPH NUMBER d	DESCRIPTION OF ITEM SUBMITTED e	DATA f	DRAWINGS g	INSTRUCTIONS h	SCHEDULES i	STATEMENTS j	REPORTS k	CERTIFICATES l	SAMPLES m	RECORDS n	INFORMATION ONLY o	GOVERNMENT APPROVED p	REVIEWER q	SUBMIT r	APPROVAL NEEDED BY s	MATERIAL NEEDED BY t	CODE u	DATE v	SUBMIT TO GOVERN-MENT w	CODE x	DATE y	REMARKS z
			1.2	Records & Tests									X	X		C									

ENG FORM 4288-R, MAR 95 EDITION OF SEP 93 IS OBSOLETE PAGE_____ OF_____ PAGES (Proponent CEMP-CE)

SUBMITTAL REGISTER (ER 415-1-10)																							CONTRACT NO.		
TITLE AND LOCATION				DITCH NO. 1 AND DITCH NO. 6 COUNTY BRIDGE MILE 1.72 PEMISCOT COUNTY, MISSOURI											CONTRACTOR								SPECIFICATION SECTION 02542		
					TYPE OF SUBMITTAL									CLASSI-FICATION			CONTRACTOR SCHEDULE DATES			CONTRACTOR ACTION			GOVERNMENT ACTION		
ACTIVITY NO. a	TRANS-MITTAL NO. b	ITEM NO. c	SPECIFICATION PARAGRAPH NUMBER d	DESCRIPTION OF ITEM SUBMITTED e	DATA f	DRAWINGS g	INSTRUCTIONS h	SCHEDULES i	STATEMENTS j	REPORTS k	CERTIFICATES l	SAMPLES m	RECORDS n	INFORMATION ONLY o	GOVERNMENT APPROVED p	REVIEWER q	SUBMIT r	APPROVAL NEEDED BY s	MATERIAL NEEDED BY t	CODE u	DATE v	SUBMIT TO GOVERN-MENT w	CODE x	DATE y	REMARKS z
			1.2	Records & Tests									X	X		C									
			2.1.2	Samples (Stone, If Required)								X			X	C									
			2.2.2	Test Report (Certified)						X	X			X		C									
			2.2.2	Samples (Filter Material)								X			X	C									

ENG FORM 4288-R, MAR 95 EDITION OF SEP 93 IS OBSOLETE PAGE_____ OF_____ PAGES (Proponent CEMP-CE)

SUBMITTAL REGISTER (ER 415-1-10)																							CONTRACT NO.		
TITLE AND LOCATION				DITCH NO. 1 AND DITCH NO. 6 COUNTY BRIDGE MILE 4.03 PEMISCOT COUNTY, MISSOURI											CONTRACTOR								SPECIFICATION SECTION 02700		
					TYPE OF SUBMITTAL									CLASSI-FICATION			CONTRACTOR SCHEDULE DATES			CONTRACTOR ACTION			GOVERNMENT ACTION		
ACTIVITY NO. a	TRANS-MITTAL NO. b	ITEM NO. c	SPECIFICATION PARAGRAPH NUMBER d	DESCRIPTION OF ITEM SUBMITTED e	DATA f	DRAWINGS g	INSTRUCTIONS h	SCHEDULES i	STATEMENTS j	REPORTS k	CERTIFICATES l	SAMPLES m	RECORDS n	INFORMATION ONLY o	GOVERNMENT APPROVED p	REVIEWER q	SUBMIT r	APPROVAL NEEDED BY s	MATERIAL NEEDED BY t	CODE u	DATE v	SUBMIT TO GOVERN-MENT w	CODE x	DATE y	REMARKS z
			1.2	Records & Tests									X	X		C									
			2.1	Manufacturer's Certificates Statement							X			X		C									

ENG FORM 4288-R, MAR 95 EDITION OF SEP 93 IS OBSOLETE PAGE_____ OF_____ PAGES (Proponent CEMP-CE)

SUBMITTAL REGISTER (ER 415-1-10)																							CONTRACT NO.		
TITLE AND LOCATION				DITCH NO. 1 AND DITCH NO. 6 COUNTY BRIDGE MILE 4.03 PEMISCOT COUNTY, MISSOURI											CONTRACTOR								SPECIFICATION SECTION 02935		
					TYPE OF SUBMITTAL									CLASSI-FICATION			CONTRACTOR SCHEDULE DATES			CONTRACTOR ACTION			GOVERNMENT ACTION		
ACTIVITY NO. a	TRANS-MITTAL NO. b	ITEM NO. c	SPECIFICATION PARAGRAPH NUMBER d	DESCRIPTION OF ITEM SUBMITTED e	DATA f	DRAWINGS g	INSTRUCTIONS h	SCHEDULES i	STATEMENTS j	REPORTS k	CERTIFICATES l	SAMPLES m	RECORDS n	INFORMATION ONLY o	GOVERNMENT APPROVED p	REVIEWER q	SUBMIT r	APPROVAL NEEDED BY s	MATERIAL NEEDED BY t	CODE u	DATE v	SUBMIT TO GOVERN-MENT w	CODE x	DATE y	REMARKS z
			1.2	Records & Tests									X	X		C									
			2.2.1	Invoices from Suppliers										X		C									
			2.2.2	Certification Statements (Seed)							X			X		C									
			2.2.3	Samples (Mulch)								X			X	C									

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SUBMITTAL REGISTER (ER 415-1-10)																							CONTRACT NO.		
TITLE AND LOCATION				DITCH NO. 1 AND DITCH NO. 6 COUNTY BRIDGE MILE 4.03 PEMISCOT COUNTY, MISSOURI											CONTRACTOR								SPECIFICATION SECTION 03100		
					TYPE OF SUBMITTAL									CLASSI-FICATION			CONTRACTOR SCHEDULE DATES			CONTRACTOR ACTION			GOVERNMENT ACTION		
ACTIVITY NO. a	TRANS-MITTAL NO. b	ITEM NO. c	SPECIFICATION PARAGRAPH NUMBER d	DESCRIPTION OF ITEM SUBMITTED e	DATA f	DRAWINGS g	INSTRUCTIONS h	SCHEDULES i	STATEMENTS j	REPORTS k	CERTIFICATES l	SAMPLES m	RECORDS n	INFORMATION ONLY o	GOVERNMENT APPROVED p	REVIEWER q	SUBMIT r	APPROVAL NEEDED BY s	MATERIAL NEEDED BY t	CODE u	DATE v	SUBMIT TO GOVERN-MENT w	CODE x	DATE y	REMARKS z
			1.2	Records & Tests									X	X		C										
			1.4.1	Shop Drawings (Formwork for		X								X		C										
				Concrete)																						
			1.4.2	Manufacturer's Literature (Form	X									X		C										
				work for Concrete)																						
			3.6	Inspection Results										X		C										

SUBMITTAL REGISTER
(ER 415-1-10)

CONTRACT NO.

TITLE AND LOCATION: DITCH NO. 1 AND DITCH NO. 6 COUNTY BRIDGE MILE 4.03
PEMISCOT COUNTY, MISSOURI

CONTRACTOR

SPECIFICATION SECTION: 03200

ACTIVITY NO. a	TRANSMITTAL NO. b	ITEM NO. c	SPECIFICATION PARAGRAPH NUMBER d	DESCRIPTION OF ITEM SUBMITTED e	TYPE OF SUBMITTAL: DATA f	DRAWINGS g	INSTRUCTIONS h	SCHEDULES i	STATEMENTS j	REPORTS k	CERTIFICATES l	SAMPLES m	RECORDS n	CLASSIFICATION: INFORMATION ONLY o	GOVERNMENT APPROVED p	REVIEWER q	CONTRACTOR SCHEDULE DATES: SUBMIT r	APPROVAL NEEDED BY s	MATERIAL NEEDED BY t	CONTRACTOR ACTION: CODE u	DATE v	SUBMIT TO GOVERNMENT w	GOVERNMENT ACTION: CODE x	DATE y	REMARKS z
			1.3	Records & Tests									X	X		C									
			1.6.2	Shop Drawings		X									X	C									
			1.6.2.1	Reinforcement Steel Schedules										X		C									
			1.6.2.2	Bar Support Details										X		C									
			1.6.3	Certified Test Reports (Reinforcement							X			X		C									
				Steel)																					
			1.6.3	Ladle Analysis (Reinforcement Steel)										X		C									

SUBMITTAL REGISTER (ER 415-1-10)																								CONTRACT NO.		
TITLE AND LOCATION				DITCH NO. 1 AND DITCH NO. 6 COUNTY BRIDGE MILE 4.03 PEMISCOT COUNTY, MISSOURI											CONTRACTOR									SPECIFICATION SECTION 03230		
					TYPE OF SUBMITTAL									CLASSI-FICATION			CONTRACTOR SCHEDULE DATES			CONTRACTOR ACTION			GOVERNMENT ACTION		
ACTIVITY NO. a	TRANS-MITTAL NO. b	ITEM NO. c	SPECIFICATION PARAGRAPH NUMBER d	DESCRIPTION OF ITEM SUBMITTED e	DATA f	DRAWINGS g	INSTRUCTIONS h	SCHEDULES i	STATEMENTS j	REPORTS k	CERTIFICATES l	SAMPLES m	RECORDS n	INFORMATION ONLY o	GOVERNMENT APPROVED p	REVIEWER q	SUBMIT r	APPROVAL NEEDED BY s	MATERIAL NEEDED BY t	CODE u	DATE v	SUBMIT TO GOVERN-MENT w	CODE x	DATE y	REMARKS z
			1.4	Records & Tests									X	X		C									
			1.6.1	Shop Drawings		X									X	C									
			1.6.2	Certified Test Reports						X				X		C									
			1.6.3	Disposition Records									X	X		C									
			1.6.4	Equipment Descriptions and							X			X		C									
				Certification																					
			1.6.5	Tensioning Records									X	X		C									

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TITLE AND LOCATION				DITCH NO. 1 AND DITCH NO. 6 COUNTY BRIDGE MILE 4.03 PEMISCOT COUNTY, MISSOURI												CONTRACTOR								SPECIFICATION SECTION 03300		
					TYPE OF SUBMITTAL									CLASSI-FICATION			CONTRACTOR SCHEDULE DATES			CONTRACTOR ACTION			GOVERNMENT ACTION		
ACTIVITY NO.	TRANS-MITTAL NO.	ITEM NO.	SPECIFICATION PARAGRAPH NUMBER	DESCRIPTION OF ITEM SUBMITTED	DATA	DRAWINGS	INSTRUCTIONS	SCHEDULES	STATEMENTS	REPORTS	CERTIFICATES	SAMPLES	RECORDS	INFORMATION ONLY	GOVERNMENT APPROVED	REVIEWER	SUBMIT	APPROVAL NEEDED BY	MATERIAL NEEDED BY	CODE	DATE	SUBMIT TO GOVERN-MENT	CODE	DATE	REMARKS
a	b	c	d	e	f	g	h	l	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z
			1.6	Records & Tests									X	X		C									
			1.5.1.1	Concrete Mixture Proportions											X	C									
			1.5.1.2	Certificates of Compliance (Cement)							X			X		C									
			1.5.1.2	Mill Test Report (Cement)						X				X		C									
			1.5.2.1	Certificate of Compliance (Accelerating							X			X		C									
				Admixture)																					
			1.5.2.2	Certificate of Compliance (Impervious							X			X		C									
				Sheet Curing Material)																					
			1.5.2.3	Certificate of Compliance							X			X		C									
				(Air-Entraining Admixture)																					
			1.5.2.4	Certificate of Compliance (Water-							X			X		C									
				Reducing Admixture)																					
			1.5.2.5	Certificate of Compliance (Curing							X			X		C									
				Compound)																					
			3.1.2.3	Certified Test Reports (If Required)						X				X		C									
				Scales																					

SUBMITTAL REGISTER
(ER 415-1-10)

CONTRACT NO.

TITLE AND LOCATION: DITCH NO. 1 AND DITCH NO. 6 COUNTY BRIDGE MILE 4.03
PEMISCOT COUNTY, MISSOURI

CONTRACTOR

SPECIFICATION SECTION: 03425

ACTIVITY NO. a	TRANSMITTAL NO. b	ITEM NO. c	SPECIFICATION PARAGRAPH NUMBER d	DESCRIPTION OF ITEM SUBMITTED e	TYPE OF SUBMITTAL: DATA f	DRAWINGS g	INSTRUCTIONS h	SCHEDULES i	STATEMENTS j	REPORTS k	CERTIFICATES l	SAMPLES m	RECORDS n	CLASSIFICATION: INFORMATION ONLY o	GOVERNMENT APPROVED p	REVIEWER q	CONTRACTOR SCHEDULE DATES: SUBMIT r	APPROVAL NEEDED BY s	MATERIAL NEEDED BY t	CONTRACTOR ACTION: CODE u	DATE v	SUBMIT TO GOVERNMENT w	GOVERNMENT ACTION: CODE x	DATE y	REMARKS z
			1.7	Records & Tests									X	X		C									
			3.2	Verified Copies Test Results							X			X		C									
			3.3	Shop Drawings		X								X		C									

ENG FORM 4288-R, MAR 95 EDITION OF SEP 93 IS OBSOLETE PAGE_____ OF_____ PAGES (Proponent CEMP-CE)

SUBMITTAL REGISTER (ER 415-1-10)																							CONTRACT NO.		
TITLE AND LOCATION				DITCH NO. 1 AND DITCH NO. 6 COUNTY BRIDGE MILE 4.03 PEMISCOT COUNTY, MISSOURI										CONTRACTOR									SPECIFICATION SECTION 03430		
					TYPE OF SUBMITTAL									CLASSI-FICATION			CONTRACTOR SCHEDULE DATES			CONTRACTOR ACTION			GOVERNMENT ACTION		
ACTIVITY NO. a	TRANS-MITTAL NO. b	ITEM NO. c	SPECIFICATION PARAGRAPH NUMBER d	DESCRIPTION OF ITEM SUBMITTED e	DATA f	DRAWINGS g	INSTRUCTIONS h	SCHEDULES i	STATEMENTS j	REPORTS k	CERTIFICATES l	SAMPLES m	RECORDS n	INFORMATION ONLY o	GOVERNMENT APPROVED p	REVIEWER q	SUBMIT r	APPROVAL NEEDED BY s	MATERIAL NEEDED BY t	CODE u	DATE v	SUBMIT TO GOVERN-MENT w	CODE x	DATE y	REMARKS z
			1.2	Records & Tests									X	X		C									
			3.2.1	Pile Driving Record									X	X		C									
			3.2.1	Hammer and Cushion (Literature										X		C									
				and Catalogue Cuts with Pictures																					

ENG FORM 4288-R, MAR 95 EDITION OF SEP 93 IS OBSOLETE PAGE_____ OF_____ PAGES (Proponent CEMP-CE)

SUBMITTAL REGISTER
(ER 415-1-10)

CONTRACT NO.

TITLE AND LOCATION: DITCH NO. 1 AND DITCH NO. 6 COUNTY BRIDGE MILE 4.03
PEMISCOT COUNTY, MISSOURI

CONTRACTOR

SPECIFICATION SECTION: 03440

ACTIVITY NO. a	TRANS-MITTAL NO. b	ITEM NO. c	SPECIFICATION PARAGRAPH NUMBER d	DESCRIPTION OF ITEM SUBMITTED e	TYPE OF SUBMITTAL: DATA f	DRAWINGS g	INSTRUCTIONS h	SCHEDULES i	STATEMENTS j	REPORTS k	CERTIFICATES l	SAMPLES m	RECORDS n	CLASSIFICATION: INFORMATION ONLY o	GOVERNMENT APPROVED p	REVIEWER q	CONTRACTOR SCHEDULE DATES: SUBMIT r	APPROVAL NEEDED BY s	MATERIAL NEEDED BY t	CONTRACTOR ACTION: CODE u	DATE v	SUBMIT TO GOVERN-MENT w	GOVERNMENT ACTION: CODE x	DATE y	REMARKS z
			1.5	Records & Tests									X	X		C									
			1.4	Shop Drawings (Bridge Superstructure)		X									X	DT									
			2.1.1	Manufacturer's Certificate Compliance							X			X		C									
				(Bridge Superstructure)																					
			2.1.4	Certificate of Compliance for Materials							X			X		C									

ENG FORM 4288-R, MAR 95 EDITION OF SEP 93 IS OBSOLETE PAGE_____ OF_____ PAGES (Proponent CEMP-CE)

SUBMITTAL REGISTER (ER 415-1-10)																							CONTRACT NO.		
TITLE AND LOCATION				DITCH NO. 1 AND DITCH NO. 6 COUNTY BRIDGE MILE 4.03 PEMISCOT COUNTY, MISSOURI											CONTRACTOR								SPECIFICATION SECTION 05500		
					TYPE OF SUBMITTAL									CLASSI-FICATION			CONTRACTOR SCHEDULE DATES			CONTRACTOR ACTION			GOVERNMENT ACTION		
ACTIVITY NO. a	TRANS-MITTAL NO. b	ITEM NO. c	SPECIFICATION PARAGRAPH NUMBER d	DESCRIPTION OF ITEM SUBMITTED e	DATA f	DRAWINGS g	INSTRUCTIONS h	SCHEDULES i	STATEMENTS j	REPORTS k	CERTIFICATES l	SAMPLES m	RECORDS n	INFORMATION ONLY o	GOVERNMENT APPROVED p	REVIEWER q	SUBMIT r	APPROVAL NEEDED BY s	MATERIAL NEEDED BY t	CODE u	DATE v	SUBMIT TO GOVERN-MENT w	CODE x	DATE y	REMARKS z
			1.4	Records & Tests									X	X		C									
			2.1.3	Sample (Reflective Washer)								X			X										
			2.1.4	Cert. Compliance (Materials							X			X											

ENG FORM 4288-R, MAR 95 EDITION OF SEP 93 IS OBSOLETE PAGE_____ OF_____ PAGES (Proponent CEMP-CE)

INSTRUCTIONS

1. Section 1 will be initiated by the Contractor in the required number of copies.

2. Each transmittal shall be numbered consecutively in the space provided for "Transmittal No.". This number, in addition to the contract number, will form a serial number for identifying each submittal. For new submittals or resubmits mark the appropriate box; on resubmittals, insert transmittal number of last submission as well as the new submittal number.

3. The "Item No." will be the same "Item No." as indicated on ENG FORM 4288 for each entry on this form.

4. Submittals requiring expeditious handling will be submitted on a separate form.

5. Separate transmittal form will be used for submittals under separate sections of the specifications.

6. A check shall be placed in the "Variation" column when a submittal is not in accordance with the plans and specifications--also, a written statement to that effect shall be included in the space provided for "Remarks".

7. Form is self-transmittal, letter of transmittal is not required.

8. When a sample of material or Manufacturer's Certificate of Compliance is transmitted, indicate "Sample" or "Certificate" in column c, Section I.

9. U.S. Army Corps of Engineers approving authority will assign action codes as indicated below in space provided in Section I, column i to each item submitted. In addition they will ensure enclosures are indicated and attached to the form prior to return to the contractor. The Contractor will assign action codes as indicated below in Section I, column g, to each item submitted.

THE FOLLOWING ACTION CODES ARE GIVEN TO ITEMS SUBMITTED

A	--	Approved as submitted.	E	--	Disapproved (See attached).
B	--	Approved, except as noted on drawings.	F	--	Receipt acknowledge.
C	--	Approved, except as noted on drawings. Refer to attached sheet resubmission required	FX	--	Receipt acknowledged, does not comply as noted with contract requirements.
D	--	Will be returned by separate correspondence.	G	--	Other *(Specify)*

10. Approval of items does not relieve the contractor from complying with all the requirements of the contract plans and specifications.

TRANSMITTAL OF SHOP DRAWINGS, EQUIPMENT DATA, MATERIAL SAMPLES OR MANUFACTURER'S CERTIFICATES OF COMPLIANCE (Read instructions on the reverse side prior to initiating this form)			
		CONTRACT NO.	CHECK ONE: THIS IS A NEW TRANSMITTAL THIS IS A RESUBMITTAL OF TRANSMITTAL

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01451

CONTRACTOR QUALITY CONTROL

TABLE OF CONTENTS

SECTION 01451

CONTRACTOR QUALITY CONTROL

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 3740	(1994a) Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction
ASTM E 329	(1993b) Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction

1.2 PAYMENT

Separate payment will not be made for providing and maintaining an effective Quality Control program, and all costs associated therewith shall be included in the applicable unit prices or lump-sum prices contained in the Bidding Schedule.

1.3 SUBMITTALS

Submittals shall be in accordance with Technical Requirements entitled “Submittal Procedures”. The CQC organization shall be responsible for certifying that all submittals are in compliance with the contract requirements.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

3.1 GENERAL

The Contractor is responsible for quality control and shall establish and maintain an effective quality control system in compliance with the Contract Clause entitled "Inspection of Construction." The quality control system shall consist of plans, procedures, and organization necessary to produce an end product that complies with the contract requirements. The system shall cover all construction operations, both on-site and off-site, and shall be keyed to the proposed construction sequence.

3.2 QUALITY CONTROL PLAN

3.2.1 General
The Contractor shall furnish for review by the Government, not later than 21 calendar days after receipt of Notice of Award of the contract, the Contractor Quality Control (CQC) Plan proposed to implement the requirements of the Contract

Clause entitled "Inspection of Construction." The plan shall identify personnel, procedures, control, instructions, test, records, and forms to be used. The Government will consider an interim plan for the first 15 days of operation. Construction will be permitted to begin only after acceptance of the CQC Plan or acceptance of an interim plan applicable to the particular feature of work to be started. Work outside of the features of work included in an accepted interim plan will not be permitted to begin until acceptance of a CQC Plan or another interim plan containing the additional features of work to be started.

3.2.2 Content of the CQC Plan

The CQC plan shall include, as a minimum, the following to cover all construction operations, both on-site and off-site, including work by subcontractors, fabricators, suppliers, and purchasing agents:

a. A description of the quality control organization, including a chart showing lines of authority and acknowledgment that the CQC staff shall implement the three phase control system for all aspects of the work specified. The staff shall include a CQC system manager who shall report to the project manager or someone higher in the Contractor’s organization. Project manager in this context shall mean the individual with responsibility for the overall management of the project including quality and production.

b. The name, qualifications (in resume format), duties, responsibilities, and authorities of each person assigned a CQC function.

c. A copy of the letter to the CQC System Manager signed by an authorized official of the firm which describes the responsibilities and delegates sufficient authorities to adequately perform the functions of the CQC System Manager, including authority to stop work which is not in compliance with the contract. The CQC System Manager shall issue letters of direction to all other various quality control representatives outlining duties, authorities, and responsibilities. Copies of these letters will also be furnished to the Government.

d. Procedures for scheduling, reviewing, certifying, and managing submittals, including those of subcontractors, off-site fabricators, suppliers, and purchasing agents. These procedures shall be in accordance with Section 01330 SUBMITTAL PROCEDURES.

e. Control, verification, and acceptance testing procedures for each specific test to include the test name, specification paragraph requiring test, feature of work to be tested, test frequency, and person responsible for each test. The Contracting Officer will approve Laboratory facilities.

f. Procedures for tracking preparatory, initial, and follow-up control phases and control, verification, and acceptance tests including documentation.

g. Procedures for tracking construction deficiencies from identification through acceptable corrective action. These procedures will establish verification that identified deficiencies have been corrected.

h. Reporting procedures, including proposed reporting formats.

i. A list of the definable features of work. A definable feature of work is a task that is separate and distinct from other tasks and has separate control requirements. Different trades or disciplines could identify it, or it could be work by the same trade in a different environment. Although each section of the specifications may generally be considered as a definable feature of work, there is frequently more than one definable feature under a particular section. This list will be agreed upon during the coordination meeting.

3.2.3 Acceptance of Plan

Acceptance of the Contractor's plan is required prior to the start of construction. Acceptance is conditional and will be predicated on satisfactory performance during the construction. The Government reserves the right to require the Contractor to make changes in his CQC plan and operations including removal of personnel, as necessary, to obtain the quality specified.

3.2.4 Notification of Changes

After acceptance of the QC plan, the Contractor shall notify the Contracting Officer in writing a minimum of seven calendar days prior to any proposed change. Proposed changes are subject to acceptance by the Contracting Officer.

3.3 COORDINATION MEETING

After the Preconstruction Conference, before start of construction, and prior to acceptance by the Government of the Quality Control Plan, the Contractor shall meet with the Contracting Officer or Authorized Representative and discuss the Contractor's quality control system. During the meeting, a mutual understanding of the system details shall be developed, including the forms for recording the CQC operations, control activities, testing, administration of the system for both on-site and off-site work, and the interrelationship of Contractor's Management and control with the Government's Quality Assurance. Minutes of the meeting shall be prepared by the Government and signed by both the Contractor and the Contracting Officer. The minutes shall become a part of the contract file. There may be occasions when subsequent conferences will be called by either party to reconfirm mutual understandings and/or address deficiencies in the CQC system or procedures which may require corrective action by the Contractor.

3.4 QUALITY CONTROL ORGANIZATION

3.4.1 CQC System Manager

The Contractor shall identify an individual within his organization at the worksite who shall be responsible for overall management of CQC and have the authority to act in all CQC matters for the Contractor. This CQC System Manager shall be subject to acceptance by the Contracting Officer. The CQC System Manager shall be assigned as System Manager but may have other duties in addition to quality control.

3.4.2 CQC Staff

A staff shall be maintained under the direction of the CQC System Manager to perform all CQC activities. An alternate will be identified to serve in the absence of the CQC System Manager. The staff must be of sufficient size to ensure adequate CQC coverage of all work phases, work shifts, and work crews involved in the construction. These personnel may perform other duties, but must be fully qualified by experience and technical training to perform their assigned CQC responsibilities and must be allowed sufficient time to carry out these responsibilities. The CQC plan will clearly state the duties and responsibilities of each staff member. All CQC Staff members or replacements shall be subject to acceptance by the Contracting Officer.

3.4.3 Additional Requirement

In addition to the above requirements, the CQC System Manager and his alternate shall complete the course entitled "Construction Quality Management for Contractors". The Memphis District as well as other Corps Districts periodically offer this course.

3.5 CONTROL

The controls shall include at least three phases of control to be conducted by the CQC System Manager for all definable features of work, as follows:

3.5.1 Preparatory Phase

This phase shall be performed prior to beginning work on each definable feature of work and shall include:

a. A review of each paragraph of applicable specifications.

b. A review of the contract drawings.

c. A check to assure that all materials and/or equipment have been tested, submitted, and approved.

d. A check to assure that provisions have been made to provide required control inspection and testing.

e. Examination of the work area to assure that all required preliminary work has been completed and is in compliance with the contract.

f. A physical examination of required materials, equipment, and sample work to assure that they are on hand, conform to approved shop drawings or submitted data, and are properly stored.

g. A review of the appropriate activity hazard analysis to assure safety requirements are met.

h. Discussion of procedures for constructing the work including repetitive deficiencies. Document construction tolerances and workmanship standards for that phase of work.

i. A check to ensure that the portion of the plan for the work to be performed has been accepted by the Contracting Officer.

j. The Government shall be notified at least 24 hours in advance of beginning any of the required action of the preparatory phase. This phase shall include a meeting conducted by the CQC System Manager and attended by the superintendent, other CQC personnel (as applicable), and the foreman responsible for the definable feature. The results of the preparatory phase actions shall be documented by separate minutes prepared by the CQC System Manager and attached to the daily CQC report. The Contractor shall instruct applicable workers as to the acceptable level of workmanship required in order to meet contract specifications.

3.5.2 Initial Phase

This phase shall be accomplished at the beginning of a definable feature of work. The following shall be accomplished:

a. A check of preliminary work to ensure that it is in compliance with contract requirements. Review minutes of the preparatory meeting.

b. Verification of full contract compliance. Verify required control inspection and testing.

c. Establish level of workmanship and verify that it meets minimum acceptable workmanship standards. Compare with sample panels as appropriate.

d. Resolve all differences.

e. Check safety to include compliance with and upgrading of the safety plan and activity hazard analysis. Review the activity analysis with each worker.

f. The Government shall be notified at least 24 hours in advance of beginning the initial phase. Separate minutes of this phase shall be prepared by the CQC System Manager and attached to the daily CQC report. Exact location of initial phase shall be indicated for future reference and comparison with follow-up phases.

g. The initial phase should be repeated for each new crew to work on-site, or any time acceptable specified quality standards are not being met.

3.5.3 Follow-up Phase

Daily checks shall be performed to assure continuing compliance with contract requirements, including control testing, until completion of the particular feature of work. The checks shall be made a matter of record in the CQC documentation. Final follow-up checks shall be conducted and all deficiencies corrected prior to the start of additional features of work which may be affected by the deficient work. The Contractor shall not build upon or conceal non-conforming work.

3.5.4 Additional Preparatory and Initial Phases

As determined by the Government, additional preparatory and initial phases may be conducted on the same definable features of work if the quality of on-going work is unacceptable, if there are changes in the applicable CQC staff, on-site production supervision or work crew, if work on a definable feature is resumed after a substantial period of inactivity, or if other problems develop.

3.6 TESTS

3.6.1 Testing Procedure

The Contractor shall perform specified or required tests to verify that control measures are adequate to provide a product which conforms to contract requirements. Testing includes operation and/or acceptance tests when specified. The Contractor shall procure the services of a Corps of Engineers approved testing laboratory or establish an approved testing laboratory at the project site. The Contractor shall perform the following activities and record and provide the following data:

a. Verify that testing procedures comply with contract requirements.

b. Verify that facilities and testing equipment are available and comply with testing standards.

c. Check test instrument calibration data against certified standards.

d. Verify that recording forms and test identification control number system, including all of the test documentation requirements, have been prepared.

e. Results of all tests taken, both passing and failing tests, will be recorded on the CQC report for the date taken. Specification paragraph reference, location where tests were taken, and the sequential control number identifying the test will be given. If approved by the Contracting Officer, actual test reports may be submitted later with a reference to the test number and date taken. An information copy of tests performed by an off-site or commercial test facility will be provided directly to the Contracting Officer.

Failure to submit timely test reports as stated may result in nonpayment for related work performed and disapproval of the test facility for this contract.

3.6.2 Testing Laboratories

3.6.2.1 Capability Check

The Contracting Officer reserves the right to check laboratory equipment in the proposed laboratory for compliance with the standards set forth in the contract specifications and to check the laboratory technician's testing procedures and techniques. Laboratories utilized for testing soils, concrete, asphalt, and steel shall meet criteria detailed in ASTM D 3740 and ASTM E 329.

3.6.2.2 Capability Recheck

If the selected laboratory fails the capability check, the Contractor will be assessed a charge to reimburse the Government for each succeeding recheck of the laboratory or the checking of a subsequently selected laboratory. Such costs will be deducted from the contract amount due the Contractor. There will be no extension of time allowed due to necessity to perform capability rechecks.

3.6.3 On-Site Laboratory

The Contracting Officer reserves the right to utilize the Contractor's control testing laboratory and equipment to make assurance tests and to check the Contractor's testing procedures, techniques, and test results at no additional cost to the Government.

3.6.4 Furnishing or Transportation of Samples for Testing

Costs incidental to the transportation of samples or materials will be borne by the Contractor. Samples of materials for test verification and acceptance testing by the Government shall be delivered by the Contractor to a location specified by the Contracting Officer.

3.7 COMPLETION INSPECTION

At the completion of all work or any increment thereof established by a completion time stated in the Special Contract Requirements entitled "Commencement, Prosecution, and Completion of Work," or stated elsewhere in the specifications, the CQC System Manager shall conduct an inspection of the work and develop a "punch list" of items which do not conform to the approved drawings and specifications. Such a list of deficiencies shall be included in the CQC documentation, as required by paragraph DOCUMENTATION below, and shall include the estimated date by which the deficiencies will be corrected. The CQC System Manager or staff shall make a second inspection to ascertain that all deficiencies have been corrected and so notify the Government. These inspections and any deficiency corrections required by this paragraph will be accomplished within the time stated for completion of the entire work or any particular increment thereof if the project is divided into increments by separate completion dates.

3.8 DOCUMENTATION

The Contractor shall maintain current records providing factual evidence that required quality control activities and/or tests have been performed. These records shall include the work of subcontractors and suppliers and shall be on an acceptable form that includes, as a minimum, the following information:

a. Contractor/subcontractor and their area of responsibility.

b. Operating plant/equipment with hours worked, idle, or down for repair.

c. Work performed each day, giving location, description, and by whom. When Network Analysis (NAS) is used, identify each phase of work performed each day by NAS activity number.

d. Test and/or control activities performed with results and references to specifications/drawings requirements. The control phase should be identified (Preparatory, Initial, Follow-up). List deficiencies noted along with corrective action.

e. Quantity of materials received at the site with statement as to acceptability, storage, and reference to specifications/drawings requirements.

f. Submittals reviewed, with contract reference, by whom, and action taken.

g. Off-site surveillance activities, including actions taken.

h. Job safety evaluations stating what was checked, results, and instructions or corrective actions.

i. Instructions given/received and conflicts in plans and/or specifications.

j. Contractor’s verification statement.

These records shall indicate a description of trades working on the project; the number of personnel working; weather conditions encountered; and any delays encountered. These records shall cover both conforming and deficient features and shall include a statement that equipment and materials incorporated in the work and workmanship comply with the contract. The original and one copy of these records in report form shall be furnished to the Government daily within 24 hours after the date(s) covered by the report, except that reports need not be submitted for days on which no work is performed. As a minimum, one report shall be prepared and submitted for every seven days of no work and on the last day of a no work period. All calendar days shall be accounted for throughout the life of the contract. The first report following a day of no work shall be for that day only. Reports shall be signed and dated by the CQC System Manager. The report from the CQC System Manager shall include copies of test reports and copies of reports prepared by all subordinate quality control personnel.

3.9 NOTIFICATION OF NONCOMPLIANCE

The Contracting Officer will notify the Contractor of any detected noncompliance with the foregoing requirements. The Contractor shall take immediate corrective action after receipt of such notice. Such notice, when delivered to the Contractor at the worksite, shall be deemed sufficient for the purpose of notification. If the Contractor fails or refuses to comply promptly, the Contracting Officer may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to such stop orders shall be made the subject of claim for extension of time or for excess costs or damages by the Contractor.

-- End of Section --

DIVISION 1 - GENERAL REQUIREMENTS

SECTION 01452

PROJECT SIGN, BARRICADES, AND TRAFFIC CONTROL SIGNS

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SECTION 01452

PROJECT SIGN, BARRICADES, AND TRAFFIC CONTROL SIGNS

PART 1 GENERAL

1.1 SCOPE

The work covered by this section consists of furnishing, erecting, maintaining, and removing project sign, barricades, and traffic control signs.

1.2 PROJECT SIGN

The Contractor shall furnish, erect, and maintain one double faced project sign at bridge site, at the specific location designated by the Contracting Officer. The sign shall be constructed of 3/4-inch A-C exterior plywood or 22 gage metal, mounted on a substantial framework of 2-inch material. Size, lettering, color and paint shall conform to the details shown on the drawing "Temporary Project Sign" included at the end of this section. Upon request, the Government will furnish without cost to the Contractor one decal of the Engineer Castle. The sign shall be erected as soon as practicable, but not later than 15 calendar days after the date established for commencement of work. The sign shall be removed upon completion of all other construction work under the contract and will become the property of the Contractor.

1.3 BARRICADES AND TRAFFIC CONTROL SIGNS

1.3.1 General

Barricades and traffic control signs shall conform to the "Manual on Uniform Traffic Control Devices for Streets and Highways," Current Edition.

1.3.2 Traffic Control Signs

The Contractor shall erect, maintain and remove traffic control signs at the locations indicated on the drawings. The signs shall be set up prior to the start of construction. Signs shall be properly maintained and shall be removed when no longer needed. Signs shall be kept in proper position, clean, and legible at all times. Damaged, defaced, or dirty signs shall be cleaned, repaired, or replaced. Sign supports shall be neatly constructed and shall be cleaned or repaired as necessary. Signs may be mounted on a single post except that signs wider than 48 inches or larger than 10 square feet in area shall be mounted on two posts. Signs that are to convey their messages during hours of darkness shall be reflectorized or illuminated.

1.3.3 Barricades

The barricades shall be erected at the locations and in the sequence indicated on the drawings. When the construction is complete and the bridge and new roadway at site are ready to receive traffic, the barricades shall be removed.

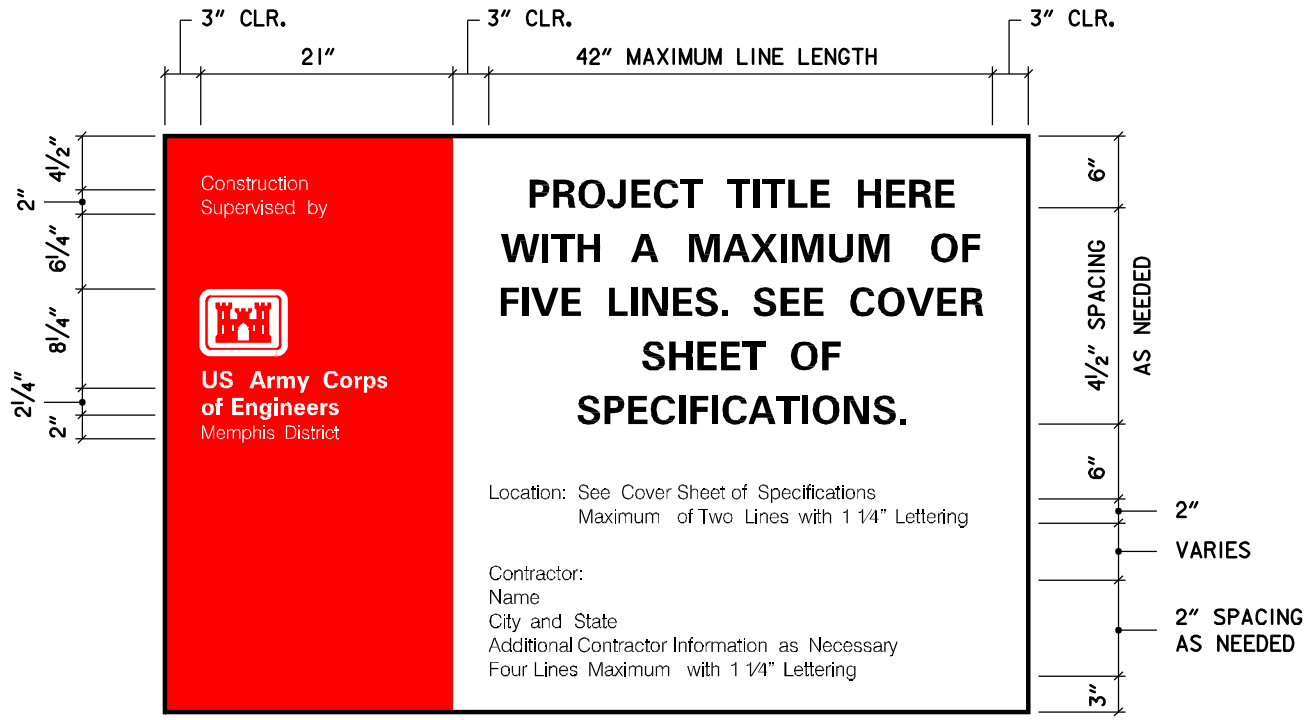
1.4 PAYMENT

No separate payment will be made for erecting, maintaining and removing barricades and traffic control signs, and all costs in connection therewith will be considered an incidental obligation of the Contractor.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

--End of Section--



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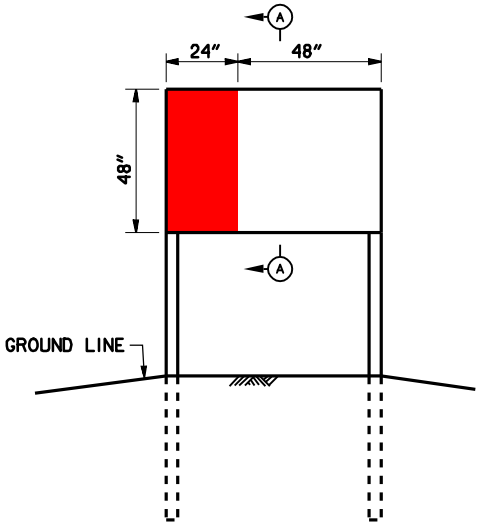

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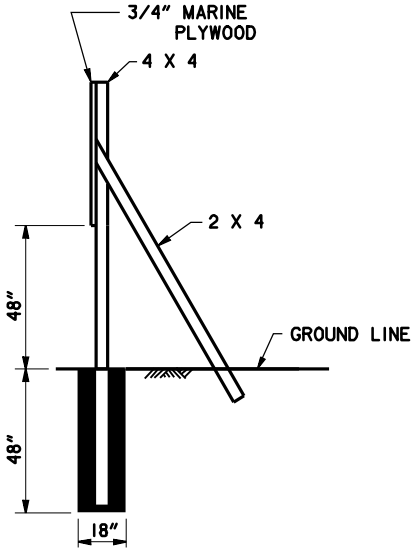

SECTION A–A

SPECIFICATIONS

1. SIGN PANEL SHALL BE 4' x 6' x ¾" MARINE PLYWOOD OR 22 GAGE SHEET METAL.
2. POSTS AND BRACING SHALL BE TREATED, NO.1 GRADE YELLOW PINE.
3. ALL EXPOSED SURFACES SHALL BE GIVEN ONE COAT OF LINSEED OIL AND WIPED PRIOR TO PRIMING.
4. ALL EXPOSED SURFACES SHALL BE GIVEN ONE COAT OF WHITE AS PRIMER. SECOND COAT SHALL BE COMMUNICATIONS RED ON LEFT AND WHITE ELSEWHERE.
5. THE LEFT SECTION SHALL BE RED WITH WHITE LEGEND. THE RIGHT SECTION SHALL BE WHITE WITH BLACK LEGEND.
6. PAINT SHALL BE BENJAMIN MOORE NO. 120-60 POLY-SILICONE ENAMEL OR APPROVED
7. ALL LETTERING SHALL BE 1¼" EXCEPT FOR THE WORDS "US Army Corps of Engineers" AND THE PROJECT TITLE. THE WORDS "US Army Corps of Engineers" SHALL BE 1½" TALL. THE PROJECT TITLE LETTERING SHALL BE A MINIMUM OF 1½" TALL AND A MAXIMUM OF 3½" TALL. THE LETTERING SIZE SHALL BE CHOSEN SUCH THAT LARGEST POSSIBLE LETTERS ARE USED WITHOUT EXCEEDING A MAXIMUM LINE LENGTH OF 42". THE NUMBER OF LINES IN THE PROJECT TITLE SHALL MATCH THAT SHOWN ON THE COVER SHEET OF THE SPECIFICATIONS.

SCALE: NONE JUNE 1998

U.S. ARMY ENGINEER DISTRICT, MEMPHIS
CORPS OF ENGINEERS
MEMPHIS, TENNESSEE

TEMPORARY PROJECT SIGN

DIVISION 2 - SITE WORK

SECTION 02110

CLEARING AND GRUBBING

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SECTION 02110

CLEARING AND GRUBBING

PART 1 GENERAL

1.1 SCOPE

The work covered by this section consists of furnishing all plant, labor, equipment, and materials, and performing all operations necessary for the clearing and grubbing of the areas specified herein; for removal of existing bridge and piling; for the disposal of debris from clearing and grubbing; and for the filling of grubbing holes, all as specified herein and/or indicated on the drawings.

1.2 QUALITY CONTROL

The Contractor shall establish and maintain quality control for the work specified in this section to assure compliance with contract requirements and maintain records of his quality control for all construction operations including but not limited to the following:

(1) Clearing

Location and limits.

(2) Grubbing

Location, limits, depths, refill of holes and compaction.

(3) Disposition of Debris

Method and location of burying; damage to timber or improvements which are not to be cleared.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 CLEARING

Clearing shall consist of the complete removal above the ground surface and/or excavated surface, as applicable, of all trees, stumps, down timber, fencing, snags, brush, vegetation, and other debris. Areas to be cleared shall include all specific areas where any work is required, and all other areas within the right-of-way limits which are necessary for construction operations and operation of the Contractor’s equipment. Unnecessary removal of trees or damage to trees to be left standing will not be allowed. If regrowth of vegetation or trees occurs after clearing and before applicable construction, the Contractor will be required to clear the area again prior to construction operations and no payment will be made therefor.

3.2 GRUBBING

Grubbing shall consist of the removal of all stumps, tap roots, buried logs, and other projections, which have a cross section more than 1-1/2 inches in diameter. Foundations of structures and foundations of all embankments as defined in SECTION 02225 paragraph 3.3.1 and SECTION 02225 paragraph 3.4, shall be grubbed to a depth of at least 2 feet below the applicable existing or excavated surfaces. The areas to be grubbed are those specific areas within the limits specified hereinabove from which trees, stumps, down timber, fencing, snags, and other projections have been removed as specified in 3.1 above. All objectionable matter shall be removed from excavated materials which will subsequently be used in the embankments or backfills. All holes caused by grubbing, except in excavations, shall be filled with suitable material as approved by the Contracting Officer in 12-inch layers to the elevation of the adjacent ground surface or excavated surface, as applicable, and each layer compacted to a density at least equal to that of the adjoining undisturbed material.

3.3 DISPOSAL OF DEBRIS

3.3.1 General

All debris resulting from clearing and grubbing operations on this contract shall, at the Contractor’s option, be disposed of by burying, burning, or removal from the site. The Contractor shall make a reasonable effort to utilize this last method to channel materials of value resulting from clearing and grubbing operations into beneficial use.

3.3.2 Burying

If the Contractor elects to bury debris, it shall be placed in the landward one-half of excavated material placed in the disposal area indicated on the drawings. All material disposed of by burying shall be covered with a minimum of 24 inches of earth. Debris placed for burying shall be placed in such manner that it will not float into ditches or off the right-of-way prior to being covered with earth materials.

3.3.3 Burning

The Contractor shall comply with the applicable pollution restrictions of the Missouri Air Conservation Commission, P.O. Box 1062 Jefferson City, Missouri. Subject to such restrictions and obtaining any permit which may be required by said department, the Contractor may burn material within the contract area, and at any time within the contract period, provided such burning does not cause the above standards to be exceeded. Burning operations shall be conducted so as to prevent damage to standing timber or other flammable growth. The Contractor will be responsible for any damage to life and/or property resulting from fires that are started by his employees or as a result of his operations. The Contractor shall furnish at the site of burning operations adequate fire fighting equipment to properly equip his personnel for fighting fires. Fires shall be guarded at all times and shall be under constant surveillance until they have been extinguished.

3.3.4 Removal from Site

The Contractor may elect to remove from the site all debris resulting from clearing and grubbing operations for disposal off-site. All inorganic debris encountered, such as stoves, hot water heaters, old tires, etc. shall be removed from the site of the work for disposal. Such disposal shall comply with all applicable Federal, State and local laws. The Contractor may, at his option retain for his own use or disposal by sale or otherwise any such materials of value. The Government assumes no responsibility for the protection or safekeeping of any

materials retained by the Contractor. Such materials shall be removed from the site of the work before the date of completion of the work. The locations and manner of placement of clearing and grubbing debris on the right-of-way by the Contractor for his convenience prior to removal of the debris from the site of the work shall be subject to the approval of the Contracting Officer. If debris from clearing operations is placed on adjacent property, the Contractor shall obtain without cost to the Government, additional right-of-way for such purposes. Such material shall be so placed as not to interfere with roads, drainage or other improvements and in such a manner as to eliminate the possibility of its entering into channels, ditches, or streams. The Contractor shall furnish written evidence to the Contracting Officer that he has obtained from the property owner, permission for disposal of material on the owner's property. The written evidence shall consist of an authenticated copy of the conveyance under which the Contractor acquired the property rights and access thereto, prepared and executed in accordance with the laws of the State of Missouri. If temporary rights are obtained by the Contractor, then the period of time shall coincide with SECTION 00800 paragraph 1.1 hereof, plus a reasonable time for any extension granted for completion of the work.

--End of Section--

DIVISION 2 - SITE WORK

SECTION 02225

EARTHWORK

TABLE OF CONTENTS

SECTION 02225

EARTHWORK

PART 1 GENERAL

1.1 SCOPE

The work covered by this section consists of furnishing all plant, labor, materials, and equipment, and performing all operations necessary for excavation and disposal of material therefrom; construction of embankments; and all other operations incidental thereto.

1.2 QUALITY CONTROL

The Contractor shall establish and maintain quality control for the work specified in this section to assure compliance with the contract requirements and maintain records of his quality control for all construction operations including but not limited to the following:

(1) Excavation

Layout, bottom width, grades, slopes, alignment, transitions, disposition of materials, slides.

(2) Roadway Embankment

Layout, limits, grade and section, compaction, tolerances, suitability of materials.

A copy of these records and tests, as well as the records of corrective action taken, shall be furnished the Government.

1.3 APPLICABLE PUBLICATION

The following publication of the issues listed below, but referred to thereafter by basic designation only, form a part of this specification to the extent indicated by the references thereto:

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) PUBLICATIONS.

D 698-91	Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft^3 (600 kN-m/m^3))
D 1556-90 R 1996	Density and Unit Weight of Soil in Place by the Sand-Cone Method
D 2216-92 and Ed Com 1	Water (Moisture) Content of Soil and Rock
D 2922-91	Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)
D 3017-88 (R 1993)	Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth)

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 EXCAVATION

3.1.1 General

The Contractor shall excavate and remove all material of whatever nature encountered as may be necessary to produce the theoretical cross sections, bottom grade, and alignment for the channel and roadside ditches, as indicated on the drawings and/or specified herein. Smooth transitions in sections shall be made as indicated on the drawings and/or as directed. A tolerance of 0.5 foot, vertically, above or below the theoretical bottom grade of the channel excavation will be allowed provided that the theoretical cross-sectional area is obtained, that the side slopes are not steeper than specified, and that the integrity of the bridge is not impaired. Refill of over-excavation shall be required as necessary to meet the above requirements. A tolerance of two-tenths foot above or below the theoretical cross section of the roadside drainage ditches will be allowed provided that abrupt changes do not occur and that drainage is maintained.

3.1.2 Embedment of Riprap

The Contractor shall excavate, in areas where filter material and riprap are required, in such a manner that the filter material and riprap are placed beneath the theoretical cross section as indicated on the drawings. Tolerances for such excavation shall be subject to the tolerances for filter material and riprap as specified in SECTION 02542, paragraphs 3.2 and 3.3. The finished grade of the adjacent channel excavation shall conform to the finished riprap grade at and in the vicinity of the junctions of these surfaces.

3.1.3 End Bents

The Contractor shall perform such excavation as necessary for construction of the end bents. Excavated material shall be disposed of as specified in 3.2 below.

3.2 DISPOSAL OF EXCAVATED MATERIAL

Excavated material shall be utilized to the extent necessary to construct the roadway embankments. Excavated material which is not utilized in the roadway construction shall be placed in the "Excess Excavated Materials Disposal Areas" indicated on the drawings. Material placed in the disposal area shall be placed with slopes and heights as indicated on the drawings and shall be dressed to provide smooth even surfaces, and in such manner that drainage will result. End slopes shall be not steeper than 1V on 4H. Placement of excavated material shall be such that water will not be impounded. Compaction will not be required except that obtained by dressing operations.

3.3 ROADWAY EMBANKMENTS

3.3.1 General

Roadway, field road and field access ramp, embankments shall be placed to the lines, grades, and sections as indicated therefor on the drawings and/or as directed by the Contracting Officer. The suitability of each section of the foundation for placing materials thereon will be determined by the Contracting Officer. No embankment material shall be placed on or against concrete less than

14 days old, without prior approval of the Contracting Officer.

3.3.2 Materials

Materials for roadway embankments shall be those materials resulting from the required excavation which, in the opinion of the Contracting Officer, are suitable for such embankment work. No unsuitable organic or inorganic matter, sticks, trash, building debris, brush, trees, tree roots, stumps, rubbish, sod, muck, frozen material or any other objectionable matter shall be placed therein. The Contractor shall, when directed, remove any materials which the Contracting Officer considers to be objectionable in the embankment.

3.3.3 Foundation Preparation

The Contractor shall remove existing topsoil material from the roadway embankment foundations up to a depth of 6 inches below the existing ground surface. Topsoil material so removed shall be disposed of in the designated disposal areas. The surface upon which fill material is to be placed shall be compacted as specified in 3.3.5 below and thoroughly roughened prior to such placement.

3.3.4 Placement

Roadway, field road and access ramp embankments shall be placed in layers not exceeding 8 inches in thickness prior to compaction. The materials may be spread by any approved equipment and each layer shall be compacted as specified in 3.3.5 below. Crawler-type tractors, tamping rollers, and self-propelled vibratory equipment shall not be used within 2 feet of any completed or partially completed concrete structure. Fill within two feet of concrete shall be placed in layers not exceeding 6 inches in thickness before compaction and compacted by means of hand-operated mechanical tampers. All fill shall be kept thoroughly drained and no fill shall be placed on frozen ground. When, in the opinion of the Contracting Officer, the surface of any layer is too smooth to bond properly with the succeeding layer, it shall be adequately scarified before the succeeding layer is placed. A tolerance of two-tenths of one foot above the prescribed grade and cross section will be permitted in the final dressing.

3.3.5 Compaction

Each layer of embankment shall be compacted to a density of at least 95 percent of the laboratory density obtained by the standard density test (ASTM D 698). The field density determination shall be by the Sand-Cone Method (ASTM D 1556) or the Nuclear Method (ASTM D 2922, Method B). The moisture content after compaction shall be within the limits of 2 percentage points above optimum and 3 percentage points below optimum moisture content as determined by the Contractor in accordance with ASTM D 698. The field moisture content after compaction shall be performed in accordance with ASTM D 2216 or ASTM D 3017. The materials may require moistening or aerating as necessary to provide the above specified moisture content. The Contractor will perform standard laboratory density tests as specified in ASTM D 698 for each type of material used in the fill to determine optimum water content and maximum densities and will perform field density and water content tests. The Contractor shall perform field density and water content tests on each layer of material placed to assure that proper compaction is being achieved. The locations where the Contractor is to take the field density and water content tests shall be as specified by the Contracting Officer.

3.4 END BENT BACKFILL

Any backfill necessary adjacent to end bents shall be placed and compacted as specified for roadway embankment in 3.3 above.

3.5 SLIDES AND SHOALS

3.5.1 Channel

In case sliding or shoaling occurs in any part of the channel excavation prior to the final acceptance of the work, the Contractor shall repair such portions of the slides and shoals as the Contracting Officer may direct. In case the slide or shoal is caused through the fault of the Contractor, it shall be repaired without cost to the Government. In case the slide or shoal is due to no fault of the Contractor, the yardage ordered removed will be included in the yardage to be paid for at the contract unit price per cubic yard for "Excavation". Material removed from the slides and shoals shall be disposed of in the disposal areas in accordance with the provisions of 3.2 above.

3.5.2 Embankment

In the event of sliding of any part of the roadway embankment specified in 3.3.1 above, or embankment placed in the disposal areas, after completion but prior to acceptance, the Contractor shall, upon written order of the Contracting Officer, repair the slide as directed. In case the slide is caused through the fault of the Contractor, repairs shall be performed without cost to the Government. In case the slide is due to no fault of the Contractor, an equitable adjustment in the contract price will be made for its repair in accordance with CONTRACT CLAUSE entitled "Changes."

--End of Section--

LMVD STANDARD TEST METHOD FOR GRADATION

December 14, 1998

A. Select a representative sample (Note #1), weigh and dump on hard stand.

B. Select four specific size stones to use as reference stones (a1, b1, c1, and d1) while performing the "individual weight larger than" test (see example & Note #2). Selected stone sizes should represent an evenly distributed cross section of the various size stones contained within the sample. Reference stone “a1” is typically the largest stone in the sample. Procedure is similar to the standard aggregate gradation test for "individual weight retained".

C. Determine the largest size stone in the sample. (100% size)

D. Separate the sample into piles starting with the stones that are larger than reference stone “b1” and proceeding to the smallest stones. The first pile should contain all stones larger than reference stone “b1” and smaller than “a1”, the largest stone. Pile two should contain all stones larger than “c1” and smaller than “b1”. Pile 3 should contain all stones larger than “d1” and smaller than “c1”. The remaining pile should contain all stones smaller than “d1”. Use reference stones for visual comparison in separating the obviously "larger than" stones. Stones that appear close to a specific size reference stone must be individually weighed. If a stone is heavier than the specific size reference stone, it should be place in the pile containing the stones larger than the reference stone. Weigh each pile as a whole or cumulatively adding each stone in the individual piles.

E. Paragraph D above will result in "individual weight retained" figures. Calculate individual percent retained (heavier than) and cumulative percent retained and cumulative percent passing (lighter than). Record test results on the “Gradation Test Data Sheet” (plate V) as shown on example plate III. Plot percent finer by weight, along with the specification curves on ENG Form 4055.

F. See plate V and plate VI for a blank “Gradation Test Data Sheet” and a blank ENG Form 4055. Plates VII, VIII, and IX have been provided for the convenience of the contractor and can be used as necessary. These three plates have the upper and lower specification limits for “R-90”, “R-200”, and “R-650” pre-plotted on ENG Form 4055.

NOTES

1. Sample Selection. The most important part of the test and the least precise is the selection of a representative sample. No "standard" can be devised; larger quarry run stone is best sampled at the shot or muck pile by given direction to the loader; small graded riprap is best sampled by random selection from the transporting vehicles. If possible, all parties should take part in the sample selection and agree before the sample is run that the sample is representative.

2. Selection of Size for Separation. It is quite possible and accurate to run a gradation using any convenient sizes for the separation, without reference to the specifications. However, it is usually more convenient to select weights from the gradation limits, such as the 90 lbs., 40 lbs., 20 lbs., and 5 lbs. as shown in the following “R-90”example. After the test is plotted on ENG 4055 and a curve drawn, the gradation limits from the specifications shall be plotted.

(EXAMPLE)

Table From Specifications

TABLE I
(For Riprap “R 90”)

Percent Lighter by Weight (SSD)	Limits of Stone Weight, lb.
100	90-40
50	40-20
15	20-5

(EXAMPLE)

G R A D A T I O N T E S T D A T A S H E E T

Quarry AAA Quarry Inc. . Stone Tested R-90 .

Date of Test 24 May 79 . Testing Rate _____

T E S T R E P R E S E N T S

Contract No.	District	Tons
DACW66-79-C-0005	Memphis	16
	TOTAL	16

G R A D A T I O N

Stone Size (lbs.)	Individual Weight Retained	Individual % Retained	Cumulative %Coarser	Cumulative %Finer	Specification % Finer by wt
90 **“a1”**	0	0	0	100	100
40 **“b1”**	9600	30	30	70	100-50
20 **“c1”**	11200	35	65	35	50-15
5 **“d1”**	8000	25	90	10	<15
< 5 **“d1”**	3200	10	100	-	
Total Weight	32000lbs				

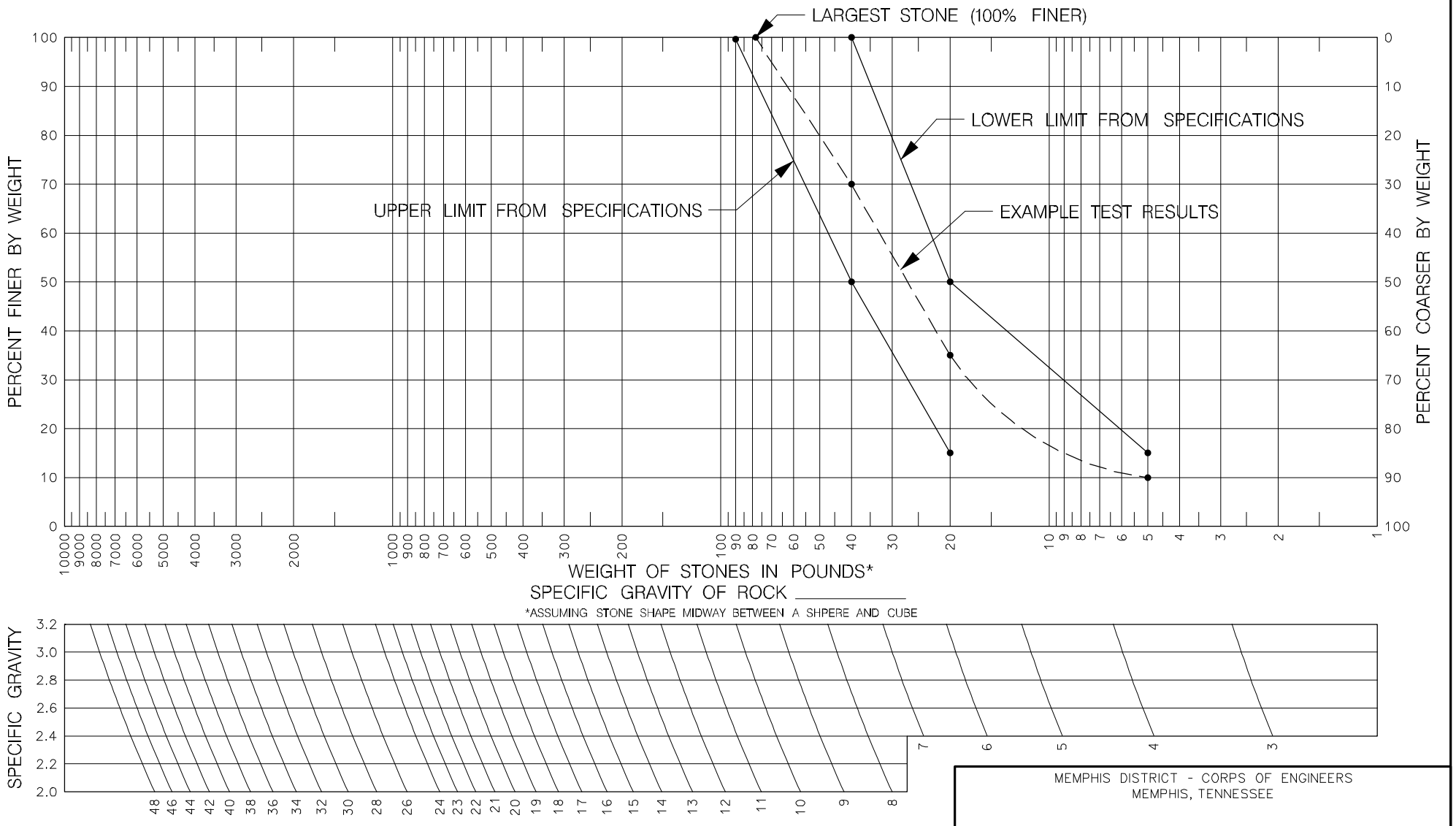
Remarks: LARGEST STONE SIZE = 78 LBS .

I Certify that the above stone sample is representative of the total tonnage covered by this test report.

Contractor Representative: Representative’s Name and Signature .

Government Representative: Representative’s Name and Signature .

PLATE III



MEMPHIS DISTRICT - CORPS OF ENGINEERS
MEMPHIS, TENNESSEE

EXAMPLE "R–90" EXAMPLE

DACW66-79-C-0005
PROJECT: NEW FRANKLIN DITCH DATE: 24 MAY 79

RIPRAP GRADATION CURVES

PLATE IV

ENG FORM 4055
APR 67

G R A D A T I O N T E S T D A T A S H E E T

Quarry _____ Stone Tested _____

Date of Test _____ Testing Rate _____

T E S T R E P R E S E N T S

Contract No.	District	Tons
	TOTAL	

G R A D A T I O N

Stone Size (lbs)	Individual Weight Retained	Individual % Retained	Cumulative %Coarser	Cumulative %Finer	Specification % Finer by wt
Total Weight					

Remarks:_____

I Certify that the above stone sample is representative of the total tonnage covered by this test report.

Contractor Representative _____

Government Representative _____

DIVISION 2 - SITE WORK

SECTION 02542

STONE PROTECTION

TABLE OF CONTENTS

SECTION 02542

STONE PROTECTION

PART 1 GENERAL

1.1 SCOPE

The work provided for herein consists of furnishing all plant, labor, equipment and materials, and performing all operations in connection with the construction of the stone protection, including foundation preparation, placement of filter material, and placement of riprap and grouting, all in accordance with these specifications and the contract drawings.

1.2 QUALITY CONTROL

The Contractor shall establish and maintain quality control for the work specified in the section to assure compliance with contract requirements and maintain records of his quality control for all construction operations including but not limited to the following:

(1) Foundation

Preparation (line and grade).

(2) Inspection

At the worksite to ensure use of specified materials.

(3) Filter

Gradation and placement.

(4) Riprap

Gradation and placement.

A copy of these records and tests, as well as the records of corrective action taken, shall be furnished the Government.

1.3 APPLICABLE PUBLICATION

The following publication of the issue listed below, but referred to thereafter by basic designation only, forms a part of this specification to the extent indicated by the reference thereto:

U.S. ARMY CORPS OF ENGINEERS, HANDBOOK FOR CONCRETE AND CEMENT (CRD)

CRD-C 106-93	Unit Weight and Voids in Aggregate
CRD-C 107-94	Specific Gravity and Absorption of Coarse Aggregate

PART 2 PRODUCTS

2.1 STONE

2.1.1 General

All stone shall be durable material as approved by the Contracting Officer. The sources from which the Contractor proposes to obtain the material shall be selected well in advance of the time when the material will be required. In case an undeveloped source is to be used, the Contractor will be required to show that an ample quantity of material is available before quality tests will be made. Stone for riprap shall be of a suitable quality to ensure permanence in the structure and in the climate in which it is to be used. It shall be free from cracks, seams and other defects that would tend unduly to increase its deterioration from natural causes. The inclusion of objectionable quantities of dirt, sand, clay and rock fines will not be permitted.

2.1.2 Sources and Evaluation Testing

Riprap shall be obtained in accordance with the provisions in SECTION 00800 STONE SOURCES, paragraph 1.30. The Contractor shall submit suitable test reports and service records to show the acceptability of the riprap. If the Contractor proposes to furnish riprap from a source not currently listed, the Contractor will make such investigations as necessary to determine whether acceptable riprap can be produced from the proposed source. Satisfactory service records on work outside the Corps of Engineers will be acceptable. In order for riprap to be acceptable on the basis of service records, riprap of a similar size must have been placed in a similar thickness and exposed to weathering under similar conditions as is anticipated for this contract, and have satisfactorily withstood such weathering for a minimum of twenty years. If no such records are available, the Contractor will make tests to assure the acceptability of the riprap. The tests to which the riprap may be subjected will include petrographic analysis, specific gravity, abrasion, absorption, wetting and drying, freezing and thawing and such other tests as may be considered necessary by the Contracting Officer. The following guidance is provided for use by the Contractor in analyzing a new source of riprap. Riprap that weighs less than 155 lbs/c.f. or has more than 2% absorption will not be accepted unless other tests and service records show that the riprap is satisfactory. The method of testing for unit weight will be CRD-C 106. The method of testing for absorption will be CRD-C 107. The cost of testing will be borne by the Contractor.

2.1.3 Gradation

Gradation shall conform to the table below and to Plate I at the end of this section and format thereof shall be as shown. Neither the width nor the thickness of any piece shall be less than one-third of its length. An allowance of 5 percent by weight for inclusion of quarry spalls will be permitted. Stone shall be reasonably well graded between the largest and smallest pieces. The table below describes the upper and lower limit curves for the riprap gradation. The graph of the riprap with the limit curves plotted thereon is inserted at the end of this section as Plate I.

TABLE I
(For Riprap "R 90")

Percent Lighter by Weight (SSD)	Limits of Stone Weight, lb.
100	90-40
50	40-20
15	20-5

2.1.4 Test Method

Gradation test method shall conform to the requirements of "LMVD Standard Test method for Gradation of Riprap" which is inserted at the end of this section as PLATE II; an Example Gradation and Worksheet, an Example Gradation and an example Gradation Test Data Sheet; all inserted at the end of this section as Plates III, IV and V.

2.1.5 Gradation Test

The Contractor shall perform a gradation test or tests on the riprap at the quarry. At least one gradation test shall be performed. The sample shall be taken by the Contractor under the supervision of the Contracting Officer, shall consist of not less than 15 tons of riprap and shall be collected in a random manner which will provide a sample which accurately reflects the actual gradation arriving at the jobsite. If collected by the truckload, each truckload shall be representative of the gradation requirements. The Contractor shall provide all necessary screens, scales and other equipment, and the operating personnel therefor, and shall grade the samples, all at no additional cost to the Government.

2.2 FILTER MATERIALS

2.2.1 General

Filter material shall consist of gravel or crushed stone. The material shall be composed of tough, durable particles, shall be reasonably free from thin, flat and elongated pieces, and shall contain no organic matter nor soft, friable particles in quantities considered objectionable by the Contracting Officer.

2.2.2 Gradation

U.S. Standard Sieve No.	Permissible Limits Percent by Weight, Passing
3-inch	100
1 1/2-inch	85-100
3/4-inch	35-70
3/8-inch	5-40
No. 4	0-10

The material shall be well-graded between the limits shown. The Contractor shall furnish a certified test report which certifies that the supplied filter material meets the above gradation and also furnish a representative sample of this same material to the Government.

PART 3 EXECUTION

3.1 BASE PREPARATION

Areas on which the filter material and riprap are to be placed shall be dressed to conform to cross sections shown on the contract drawings and as specified in SECTION 02225 - EARTHWORK. Humps and depressions within the slope lines shall be dressed to provide relatively smooth and uniform surfaces. Immediately prior to placing the filter material, the prepared base will be inspected by the Contracting Officer and no material shall be placed thereon until that area has been approved.

3.2 PLACEMENT OF FILTER MATERIAL

Filter material for riprap bedding shall be spread uniformly on the prepared base to the lines and grades as indicated on the contract drawings and in such manner as to avoid damage to the prepared base. Any damage to the surface of the prepared base during placing of the material shall be repaired before proceeding with the work. Compaction of material placed on the prepared base will not be required, but each layer shall be finished to present a reasonably even surface, free from mounds or windrows. The allowable deviation from the prescribed thickness shall be plus 2 inches.

3.3 RIPRAP

3.3.1 General

Riprap shall be placed on the prepared base and/or filter material within the limits shown on the contract drawings. Riprap shall be as specified in 2.1 above.

3.3.2 Placement

Riprap shall be placed in a manner which will produce a reasonably well-graded mass of rock with the minimum practicable percentage of voids, and shall be constructed, within the specified tolerance, to the lines and grades indicated on the contract drawings. A tolerance of plus 6 inches and minus 3 inches from the required finished surface of the riprap will be allowed provided these extremes do not occur adjacent to each other, and that neither extreme exists over more than 10 percent of the total area. Riprap shall be placed to its full course thickness in one operation and in such manner as to avoid displacing the filter material. The larger stones shall be well distributed and the entire mass of stones in their final position shall be graded to conform to the gradation specified in 2.2.2 above. The finished riprap shall be free from objectionable pockets of small stones and clusters of larger stones. Placing riprap in layers will not be permitted. Placing riprap by dumping it at the top of the slope and pushing it down the slope will not be permitted. The desired distribution of the various sizes of stones throughout the mass shall be obtained by selective loading of the material at the quarry or other source; by controlled dumping of successive loads during final placing; or by other methods of placement which will produce the specified results. Rearranging of individual stones by mechanical equipment or by hand will be required to the extent necessary to obtain a reasonably well-graded distribution of stone sizes as specified above. The Contractor shall maintain the riprap until accepted and any material displaced prior to acceptance and due to the Contractor’s negligence shall be replaced at his expense and to the lines and grades indicated on the contract drawings.

3.4 GROUTING

3.4.1 Placement

Portions of completed riprap paving as indicated on the drawings shall be

grouted. No grout shall be placed under water. Grout shall be concrete consisting of 1 part Portland cement, 2 parts sand, 3 parts of ¾-inch maximum size coarse aggregate, a suitable air-entraining admixture, and sufficient water to produce a workable mixture as determined by the Contracting Officer. The grout shall be mixed in a manner so as to produce a mixture having a consistency which will permit gravity flow into the interstices of the dumped riprap with the help of limited spading and brooming. The grout shall be used in the work within 90 minutes after mixing. Retempering of grout will not be permitted. Riprap shall not be grouted when the ambient temperature is below 40 degrees F or above 85 degrees F unless approved by the Contracting Office in writing, nor when the grout, without special protection, is likely to be subjected to freezing temperatures before final set has occurred. Prior to grouting, all surfaces of riprap shall be wetted. The riprap shall be grouted in successive strips, approximately 10 feet in width, commencing at the lowest strip and working up the slope. Each batch of grout shall be dumped on the upper portion of the ungrouted part of the strip and worked into the voids between the stones and down the slopes. Grout shall be brought to the place for final deposit by approved means, and in no case shall grout be permitted to flow on the riprapped surface a distance in excess of 10 feet. Immediately after dumping a batch of grout, it shall be distributed over the surface of the strip by the use of brooms and the grout worked into place between stones with suitable spades and trowels. Adequate precautions shall be taken to prevent grout from penetrating the prepared base. As a final operation, the excess grout shall be removed from the top surfaces of the upper stones and from packets and depressions in the surface of the stone protection by use of a stiff broom having bristles resistant to water and capable of withstanding hard sweeping; and scrubbing. After completion of any strip as specified, no workman, nor any load, shall be permitted on the grouted surface for a period of at least 24 hours. The surface of all grouted riprap shall be protected from rain, flowing water and mechanical injury for a period of at least 24 hours. The surface of all grouted riprap shall be cured by keeping the surface continuously wet for a period of not less than 72 hours or by application of an approved curing compound.

3.4.2 Maintenance

The Contractor shall maintain the grouted riprap until accepted, and any material displaced prior to acceptance and due to the Contractor’s negligence shall be replaced at his expense and to the lines and grades shown on the contract drawings.

L M V D S T A N D A R D T E S T M E T H O D F O R G R A D A T I O N

Select a representative sample (Note #1), weigh and dump on hard stand.

Select specific sizes (see example) on which to run "individual weight larger than" test. (See Note #2). Procedure is similar to the standard aggregate gradation test for "individual weight retained".

Determine the largest size stone in the sample. (100% size)

Separate by "size larger than" the selected weights, starting with the larger sizes. Use reference stones, identified weights, for visual comparison in separating the obviously "larger than" stone. Stones that appear close to the specific weight must be individually weighed to determine size grouping. Weigh each size group, either individually or cumulatively.

Paragraph D above will result in "individual weight retained" figures. Calculate individual percent retained (heavier than) and cumulative percent retained and cumulative percent passing (lighter than). Plot percent passing, along with the specification curve on ENG Form 4055.

N O T E S

1. Sample Selection. The most important part of the test and the least precise is the selection of a representative sample. No "standard" can be devised; larger quarry run stone is best sampled at the shot or muck pile by given direction to the loader; small graded riprap is best sampled by random selection from the transporting vehicles. If possible, all parties should take part in the sample selection and agree before the sample is run that the sample is representative.

2. Selection of Size for Separation. It is quite possible and accurate to run a gradation using any convenient sizes for the separation, without reference to the specifications. After the test is plotted on a curve, then the gradation limits may be plotted. Overlapping gradations with this method are no problem. It is usually more convenient, however, to select points from the gradation limits, such as the minimum 50% size, the minimum 15% size, and one or two others as separation points.

P L A T E I I

E X A M P L E G R A D A T I O N - S P E C I F I C A T I O N S

Stone Weight in Lbs.	Percent Finer by Weight
90 - 40	100
40 - 20	50
20 - 5	15

Stone Size (lbs)	Weight Retained	Individual % Retained	Cumulative % Ret.	Cumulative % Pass	Specification % Finer by wt
90	0	0	-	100	
40	9600	30	30	70	100
20	11200	35	65	35	50
5	8000	25	90	10	15
< 5	3200	10	100	-	
Total Weight	32000lbs				

Remarks: LARGEST STONE SIZE = 78 LBS

PLATE III

G R A D A T I O N T E S T D A T A S H E E T

Quarry _____ Stone Tested _____

Date of Test _____ Testing Rate _____

T E S T R E P R E S E N T S

Contract No.	District	Tons
	TOTAL	

G R A D A T I O N

Stone Size (lbs)	Weight Retained	Individual % Retained	Cumulative % Ret.	% Pass	Specification % Finer by wt
Total Weight					

Remarks:_____

I Certify that the above stone sample is representative of the total tonnage covered by this test report.

Contractor Representative

_____

Government Representative

_____

PLATE V

-- End of Section --

DIVISION 2 - SITE WORK

SECTION 02546

AGGREGATE SURFACING

TABLE OF CONTENTS

SECTION 02546

AGGREGATE SURFACING

PART 1 GENERAL

1.1 SCOPE

The work covered by this section consists of furnishing all plant, labor, materials, and equipment, and performing all operations necessary for preparation of the subgrade and construction of 6 inches of compacted aggregate surfacing upon the crown of the levee,

1.2 QUALITY CONTROL

The Contractor shall establish and maintain quality control for the work specified in this section to assure compliance with contract requirements and maintain records of his quality control for all construction operations including but not limited to the following:

1.2.1 Subgrade

Location, preparation.

1.2.2 Materials

Material delivered to the site shall conform to the specifications.

1.2.3 Placement

Width, thickness, distribution, compaction, final grading, and maintenance.

A copy of these records and tests, as well as the records of corrective action taken, shall be furnished the Government.

1.3 APPLICABLE PUBLICATIONS

The following publications of the issues listed below, but referred to elsewhere in this section by basic designation only, form a part of the specification to the extent indicated by the references thereto:

AMERICAN SOCIETY OF TESTING AND MATERIALS (ASTM) PUBLICATIONS

D 422-63 (R 1990) Particle-Size Analysis of Soils

D 4318-84 Liquid Limit, Plastic Limit, and Plasticity Index of Soils

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

Standard Specifications for Highway Construction, Edition Of 1993

PART 2 PRODUCTS

2.1 AGGREGATES

Aggregate for surfacing shall be composed of sand-clay-gravel mixtures; gravel or stone screenings; crusher run coarse aggregate consisting of gravel or crushed stone with sand and binding material; or any combination of such materials which conforms to specified requirements. All material shall be free from organic matter and lumps or balls of clay. The material shall conform to the requirements as specified in 2.1.1 and 2.1.2 below, and shall conform to the gradation specified in 2.1.3 below as determined by ASTM D 422. All aggregate surfacing furnished under this contract shall comply favorably with representative samples as to quality, gradation, and moisture content.

2.1.1 Coarse Aggregate

Coarse aggregate is defined as aggregate retained on the No. 10 (2.00 mm) sieve. Coarse aggregate shall consist of hard, durable particles or fragments of stone or gravel. Materials that are soft, pliable, or subject to rapid deterioration when exposed to weathering shall not be used.

2.1.2 Fine Aggregate

Fine aggregate is defined as aggregate passing the No. 10 (2.00 mm) sieve. Fine aggregate shall consist of natural or crushed sand, and also shall include fine mineral particles passing the No. 200 (0.075 mm) sieve. The fraction of the material passing the No. 200 (0.075 mm) sieve shall be no more than two-thirds that of the fraction passing the No. 40 (0.425-mm) sieve. That portion of the aggregate passing the No. 40 (0.425 mm) sieve shall have a liquid limit of not more than 35 and a plasticity index of not less than

6 nor more than 15, as determined by ASTM D 4318. However if crushed stone is utilized then the plasticity index shall be between 0 and 15.

2.1.3 Gradation

Aggregate resurfacing material shall conform to the following gradation when it is delivered to the job site and before it is placed on the roadway:

U.S. Standard Sieve	Permissible Limits Percentage by Weight, Passing
3"	100
1-1/2"	95-100
3/4"	65-100
3/8"	40-80
No. 4	30-60
No. 10	20-50
No. 40	15-35
No. 200	5-15

2.2 SAMPLING AND TESTING

2.2.1 General

Representative samples for testing of the material shall be taken by the Contractor under the supervision of the Contracting Officer. All costs of sampling and testing, except as specified in 2.2.3 below, shall be borne by the Contractor and no separate payment will be made therefor.

2.2.2 Contractor Testing

Prior to delivery of any material to the job site, the material shall be tested for compliance with the specifications by an approved independent testing laboratory. Such tests shall be performed before each 5,000 cubic yards of material is delivered to the job site under this contract, and in the event a noticeable change in the materials is observed during placement, such testing shall be performed at the direction of the Contracting Officer regardless of the quantity of material delivered. Certified results of the tests shall be submitted to the Contracting Officer

for approval before the next 5,000 cubic yards of material is delivered to the job site. When a noticeable change is observed during placement of the material, samples shall be obtained from the delivery truck and a gradation test shall be performed by the Contractor and COR. If this test fails to meet the requirements, then the questionable material shall be removed from the job site.

2.2.3 Government Testing

At the same time that samples for Contractor testing as specified in 2.2.2 above are taken, the Contractor shall take samples for assurance testing to be performed by and at the expense of the Government. The Contractor shall deliver such samples to Wynne Area Office, Bennie House Center Highway 1 North, P.O. Box 729, Wynne, Arkansas 72396-0729. Assurance testing requires approximately 5 days. Notice of assurance sample deliveries shall be given to the Contracting Officer's Representative prior to delivery.

PART 3 EXECUTION

3.1 CLEARING AND DEBRIS REMOVAL

All grass, weeds, sod, and other debris shall be cleared from the subgrade prior to gravel placement. Debris resulting from clearing operations shall be removed from the levee district right-of-way, in compliance with all Federal, State, and local laws. The side slopes shall be disturbed the least amount practicable, and shall be returned to a smooth slope upon completion of clearing and resurfacing operations.

3.2 USE OF HAUL ROADS

The Contractor shall acquaint himself with load limits and other regulations applicable to his use of public roads and/or highways for deliveries to be made under this contract and shall comply with all such load limits and regulations. Haul roads on the levee and its appurtenances that are used by the Contractor shall be maintained by him in a condition satisfactory for vehicular traffic. The Contractor shall not operate hauling equipment on the levee slopes except at ramps.

3.3 SUBGRADE

The subgrade shall be symmetrical about the centerline of the levee and shall be prepared as indicated on the drawings and so that drainage will occur each way from the centerline. Subgrade shall be graded and smooth. All potholes and ruts in the subgrade shall be

repaired in advance of surfacing by removing any soft material in and/or adjacent to the potholes and ruts and by placing and compacting aggregate until the damaged area is restored to the same elevation as the surrounding undamaged road surface. The potholes and ruts shall be dry at the time of repair. All fill for the subgrade is to be compacted in accordance with the requirements of Section 02222, Paragraph 3.1.4.2.

3.4 PLACEMENT

(1) Aggregate shall be placed and spread upon the subgrade in the amount required to produce a pavement with width and compacted thickness as indicated on the drawings. The placement shall be commenced at the nearest point of delivery of the resurfacing material to a reach of levee and shall be carried continuously away from such point unless otherwise authorized by the Contracting Officer. Placing of aggregate will not be allowed when the roadway surface, in the opinion of the Contracting Officer, is too wet to place aggregate. No unspread aggregate shall be left in a piled condition overnight. Reaches of resurfacing which are no longer needed for haul roads for supplying the aggregate shall be graded and dressed to provide a slope each way from the centerline and then compacted by at least four passes of a pneumatic tired roller having tire pressure of 35 to 40 pounds per square inch and a gross weight of not less than 20,000 pounds or by other approved compacting equipment which will obtain comparable compaction. A pass of the roller shall consist of the completed coverage of the surface by the roller. The compaction passes of the roller shall not be performed when the material is so wet that it is displaced under the roller or when the material is too dry for proper bonding. In the event aggregate is hauled over rolled portions of the resurfacing, such portions shall subsequently be graded, dressed and rolled again as specified hereinabove at no additional cost to the Government. The resurfacing shall be maintained in an acceptable condition until acceptance.

(2) By the end of each workday, all aggregate surfacing hauled and placed on the levee roadway shall be spread and blended into the existing levee roadway surface and ramps as specified in subparagraph (1) above. At no time under this contract shall aggregate surfacing be dumped and left at the end of the workday without being placed as specified above.

3.5 ROADWAY

The roadway shall have a 6-inch compacted thickness aggregate surface 10 feet wide.

3.6 MAINTENANCE

The Contractor shall maintain the aggregate surfacing in a good and satisfactory condition until acceptance. The Contractor shall correct any deficiencies in width and thickness and shall remove, dispose of as described in paragraph 3.1 above, and replace, without additional compensation, any deficient material placed in the work.

-- End of Section --

DIVISION 2 - SITE WORK

SECTION 02700

CULVERT REMOVAL AND INSTALLATION

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SECTION 02700

CULVERT REMOVAL AND INSTALLATION

PART 1 GENERAL

1.1 SCOPE

The work covered by this section consists of furnishing all labor, equipment, and materials, and performing all operations necessary for the removal and disposition of existing culvert, and for the installation of new corrugated metal pipe culvert and flared end sections, as indicated on the drawings, specified herein, and/or as directed.

1.2 QUALITY CONTROL

The Contractor shall establish and maintain quality control for the work specified in this section to assure compliance with contract requirements and maintain records of his quality control for all construction operations including; but, not limited to, the following:

(1) Materials

Review, prior to submittal, of certificates for compliance with specification requirements.

(2) Installation

Length, type, location, alignment, grade, slope, foundation bedding, coupling bands, repair of damaged areas.

(3) Backfill

Thickness of layers, maintenance of culvert alignment, compaction, elevation.

A copy of these records and tests, as well as the records of corrective action taken, shall be furnished the Government.

1.3 APPLICABLE PUBLICATION

The following publications of the issue listed below, but referred to thereafter by basic designation only, forms a part of this specification to the extent indicated by the reference thereto:

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) PUBLI-CATIONS.

A 760/A760M-93a	Corrugated Steel Pipe, Metallic-Coated for Sewers and Drains
A 849-94	Post Applied Coatings, Pavings, and Linings for Corrugated Steel Sewer and Drainage Pipe
D 698-91	Laboratory Compaction Characteristics of Soil using Standard Effort (12,400 ft-lbf/ft^3 (600 kN-m/m^3))
D 1556-90 with editorial	Density and Unit Weight of Soil in Place by the Sand-Cone Method

change 2
D 2922-91 Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)

PART 2 PRODUCTS

2.1 GENERAL

The zinc-coated (Galvanized) corrugated metal pipe culvert shall conform to the requirements of ASTM A 760, for Type I and shall conform to the requirements of ASTM A 849 for fully coated with paved invert using Class B material. As an alternate, aluminum coated (Aluminized) corrugated metal pipe culverts may be used conforming to ASTM A 760, Type I with no bituminous coating or paved invert required. The manufacturer's certified statement as to quality will be accepted in lieu of performing the prescribed tests. The pipes shall be fabricated from 0.064 inches thick sheets. Coupling bands for joints may be 0.052 inches thick or heavier and shall be installed as recommended by the materials manufacturer except as specified herein. Coupling bands shall be coated as specified hereinabove for the pipe and shall have corrugations, not projections, that mesh with the pipe corrugations, and if helical corrugations are used, each length of helical pipe used shall have a minimum 12-inch length of annular corrugations at each end. All installation hardware shall be as recommended by the materials manufacturer.

PART 3 EXECUTION

3.1

The existing culverts indicated on the drawings to be removed shall be removed from their present positions and disposed of by removal from the site. The Contractor shall perform such excavation as is necessary for removal of the culverts. Earth materials resulting from the excavation shall be stockpiled and subsequently used in the culvert backfill or shall be disposed of as specified in SECTION 02225, paragraph 3.2.

3.2 INSTALLATION OF CULVERT PIPE

The culvert pipe length as shown on the drawings is approximate only. The exact length of the culvert will be determined in the field by the Contracting Officer and the Contractor will be notified of such length prior to installation. The pipe shall be placed at the location indicated on the drawings. Installation of the pipe shall be accomplished in the dry. The pipe shall be bedded on a smooth surface with invert elevation as determined in the field. Joints shall be carefully made by the material manufacturer's standard method, subject to the provisions of 2 above. Pipe shall be handled with care so that damage to the coating will be minimized. Coupling band rods if applicable and damaged areas of pipe shall be coated with an approved asphaltic cement prior to placement of backfill, and in case damaged areas are at joints, such areas shall be coated prior to making the joint. The Contractor shall perform such excavation as is necessary for installation of the culverts. Excavated materials shall be utilized in the backfill or embankment or shall be disposed of as specified in Section 02225, paragraph 3.2.

3.3 BACKFILL

3.3.1 General

Backfill shall be placed around and over the culvert pipe to the line and grade indicated on the drawings and/or as directed by the Contracting Officer. Backfill material shall be obtained from the required excavations, and shall

be free from roots, muck, brush and other objectionable matter. Material used within 2 feet of the pipe shall consist of cohesive material. The Contractor will be required, when directed, to remove any materials which the Contracting Officer considers to be objectionable in the backfill. Frozen material shall not be placed in the backfill nor shall material be placed upon frozen foundations. The suitability of each section of the foundation for placing materials thereon will be determined by the Contracting Officer.

3.3.2 Compacted Backfill

Backfill material within 2 feet of the pipe shall be placed concurrently on each side of the pipe in layers not more than 6 inches in thickness prior to compaction. In placing and compacting the material, care shall be taken to insure that the backfill is rammed tight against the pipe at all points. Compaction within 2 feet of culvert pipe shall be accomplished by the use of approved mechanical hand tampers. Each layer of backfill placed within 2 feet of the culverts shall be compacted to a density of at least 95 percent of the laboratory density obtained by the standard density test (ASTM D 698), Method D. The field density determination shall be by the Sand-Cone Method (ASTM D 1556) or by the Nuclear Method (ASTM D 2922). The moisture content after compaction shall be within the limits of 2 percentage points above optimum and 3 percentage points below optimum moisture content as determined by the Contractor in accordance with ASTM D 698. The materials may require moistening or aerifying as necessary to provide the above specified moisture content. The Contractor will perform standard laboratory density tests as specified in ASTM D 698 for each type of material used in the fill to determine optimum water content and maximum densities. Tests shall be performed by an approved commercial testing laboratory or may be tested by facilities furnished by the Contractor. The Contractor shall perform field density and water content tests on each layer of material placed to assure that proper compaction is being achieved. The location where the Contractor is to take the field density and water content tests shall be as specified by the Contracting Officer. The Contracting Officer reserves the right to make quality assurance tests at the Governments Laboratory to verify Contractor test results. The cost of the assurance testing at the Government Laboratory will be at the Governments expense.

3.3.3 Semicompacted Backfill

The remaining culvert backfill shall be placed in layers not exceeding 12 inches in thickness prior to compaction and shall be semicompacted. Each layer shall be compacted by at least 3 passes of a crawler type tractor weighing not less than 20,000 pounds and exerting a unit tread pressure of not less than 6 pounds per square inch and operated at speeds not to exceed 3.5 miles per hour or by other approved compacting equipment which will attain comparable compaction. When in the opinion of the Contracting Officer, the surface of any layer is too smooth to bond properly with the succeeding layer, it shall be adequately scarified before the succeeding layer is placed. The layers shall be uniformly spread, distributed, and otherwise manipulated during placement to such an extent that individual loads of material deposited on the fill will not remain intact, and large, open voids in the fill will be eliminated.

3.4 FILTER MATERIAL AND RIPRAP AT THE CULVERTS

Filter material and riprap at the culverts shall be as shown on the drawings and shall be as specified in SECTION 02542 - STONE PROTECTION.

--End of Section--

DIVISION 2 - SITE WORK

SECTION 02935

ESTABLISHMENT OF TURF

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SECTION 02935

ESTABLISHMENT OF TURF

PART 1 GENERAL

1.1 SCOPE

The work provided for herein consists of furnishing all plant, labor, equipment, and materials, and performing all operations necessary for dressing, fertilizing, and turfing areas and the installation of erosion control as specified herein.

1.2 QUALITY CONTROL

The Contractor shall establish and maintain quality control for the work specified in this section to assure compliance with contract requirements and maintain records of his quality control for all construction operations including but not limited to the following:

(1) Preparation of Ground Surface

Location and quality of dressing, including necessary clearing, filling, or dressing out of washes, smoothness and uniformity of surfaces, and time of year.

(2) Fertilizing

Quality of materials, areas fertilized, quantity applied, and method of application.

(3) Seeding

Quality and type of seed, area covered, rate of application, quantity of seed used, and method of distribution.

(4) Mulching

Quality of materials, area mulched, quantity applied, method of application.

A copy of these records and tests, as well as the records of corrective action taken, shall be furnished the Government.

1.3 AREAS TO BE TREATED

Fertilizing, seeding, and mulching shall be performed on all surfaces of the permanent embankments and other disturbed surfaces, outside of the channel excavation, including the surface of the material placed in the disposal areas, which are not covered with water or other materials.

PART 2 PRODUCTS

2.1 MATERIALS

2.1.1 Fertilizer

Fertilizer shall consist of a mixture containing nitrogen, phosphorous, and

potash, and shall be uniform in composition and free-flowing. The fertilizer may be delivered to the site in bags or other convenient containers or delivered in bulk. If delivered in bags or containers, the fertilizer shall be fully labeled in accordance with the applicable fertilizer laws of the State of Missouri, and shall bear the name, tradename or trademark, and warranty of the producer. The fertilizer shall meet the requirements of the State of Missouri for commercial fertilizer. Should the commercial fertilizer be furnished in bulk, the Contractor shall furnish certified weight tickets and a certified quantitative analysis report, in triplicate, from a recognized testing laboratory certifying the nutrient ratio of the materials. In the event the commercial mixture is delivered to the job site in the original containers unopened, the analysis report will not be required.

2.1.2 Seed

Seed labeled in accordance with U.S. Department of Agriculture Rules and Regulations under the Federal Seed Act shall be furnished by the Contractor. Seed shall be furnished in sealed, standard containers unless written exception is granted. Seed that is wet or moldy or that has been otherwise damaged in transit or storage will not be acceptable. The specifications for seeds shall conform to the following, unless otherwise approved by the Contracting Officer:

Kind of Seed	Minimum Purity Percent	Minimum Germination Percent
Rye	95	80
Bermuda	95	80
Sericea Lespedeza	95	80

2.1.3 Soil for Repairs

For fill of areas to be repaired, soil shall be of a quality at least equal to that which exists in areas adjacent to the area to be repaired. Soil used shall be free from roots, stones, and other materials that hinder grading, planting, and maintenance operations and shall be free from objectionable weed seeds and toxic substances.

2.1.4 Mulch

2.1.4.1 General

Threshed straw from a cereal grain such as oats, wheat, barley, rye, or rice; or wood fiber shall be furnished and applied by the Contractor. Materials that contain noxious grass or weed seeds that might be detrimental to the turfing being established or to adjacent farmland will not be acceptable.

2.1.4.2 Wood Cellulose Fiber Mulch

Wood cellulose fiber mulch for use with hydraulic application equipment shall consist of wood cellulose fiber, processed to contain no growth or germination inhibiting factors, and dyed an appropriate color to facilitate visual metering of application of the materials. The wood cellulose fiber shall contain not in excess of 10 percent moisture, air dry weight basis. The wood cellulose fiber shall be manufactured so that after addition and agitation in slurry tanks, with water, and any other additives, the fibers in the material will become uniformly suspended to form a homogeneous slurry; and that when hydraulically sprayed on the ground, the material will form a blotter-like ground cover which, after

application, will allow the absorption of moisture and allow rainfall or mechanical watering to percolate to the underlying soil. The Contractor shall be prepared to submit, on request, certification from the supplier that laboratory and field testing of the product has been accomplished, and that the product meets the foregoing requirements.

2.2 CERTIFICATES AND SAMPLES

2.2.1 Fertilizer

Duplicate signed copies of invoices from suppliers shall be furnished. Invoices shall show quantities and percentage of nitrogen, phosphorous, and potash. Upon completion of the project, a final check of the total quantity of fertilizer used will be made against total area treated, and if minimum rates of application have not been met, an additional quantity of material sufficient to make up the minimum application rate shall be distributed as directed.

2.2.2 Seed

The Contracting Officer shall be furnished duplicate signed copies of statements certifying that each container of seed delivered is labeled in accordance with the Federal Seed Act and is at least equal to the requirements specified in 2.1.2 above. This certification shall be obtained from the supplier and shall be furnished on or with all copies of seed invoices.

2.2.3 Mulch

Representative samples of the mulch materials proposed for use shall be submitted for approval.

PART 3 EXECUTION

3.1 COMMENCEMENT, PROSECUTION AND COMPLETION

3.1.1 General

Preparation of the ground surface, fertilizing, and turfing operations shall be accomplished during the season between 1 March and 30 June, or between 1 September and 15 November, inclusive, unless otherwise authorized by the Contracting Officer.

3.1.2 Sequence of Work

The sequence of operations for work prescribed in this section shall be as follows:

(1) Preparation of ground surface.

(2) Fertilizing.

(3) Seeding.

(4) Compacting.

(5) Mulching.

3.2 PREPARATION OF GROUND SURFACE

3.2.1 General

Equipment, in good condition, shall be provided for the proper preparation of the ground and for handling and placing all materials. Equipment shall be approved by the Contracting Officer before work is started.

3.2.2 Clearing

Prior to grading and finish dressing, vegetation that may interfere with turfing operations shall be removed and shall be disposed of as specified in Section 02110, paragraph 3.3. The surface shall be cleared of roots, cable, wire, and other materials that might hinder the work or subsequent maintenance.

3.2.3 Dressing

Previously established grades and/or slopes shall be maintained in a true and even condition on the areas to be turfed. Surfaces shall be prepared for fertilizing and seeding by finish dressing so as to produce smooth profiles, crown widths, side slopes, and end slopes.

3.2.4 Tillable Areas

Disposal areas occurring within tillable farmland may be seeded with a variation from the seeding mix specified in this section. The Contractor may substitute rye grass during the summer period or winter wheat during the fall season with a seeding rate per acre satisfactory to the Contracting Officer’s Representative.

3.3 SPECIAL EQUIPMENT

Hydraulic equipment used for the application of slurry of prepared wood cellulose fiber mulch shall have a built-in agitation system with an operating capacity sufficient to agitate, suspend, and homogeneously mix a slurry. The slurry distribution lines shall be large enough to prevent stoppage. The discharge line shall be equipped with hydraulic spray nozzles that will provide even distribution of the slurry on the various slopes to be mulched. The slurry tank shall have a minimum capacity of 1,000 gallons and shall be mounted on a traveling unit, which may be either self-propelled or drawn by a separate unit, that will place the slurry tank and spray nozzles near the areas to be mulched so as to provide uniform distribution without waste. The Contracting Officer may authorize equipment with a smaller tank capacity provided that the equipment has the necessary agitation system and sufficient pump capacity to spray the slurry in a uniform coat over the surface of the area to be mulched.

3.4 APPLICATION OF FERTILIZER

Fertilizer shall be distributed uniformly over the areas to be seeded at a rate which will supply not less than 40 pounds of available nitrogen, 40 pounds of available phosphorous, and 40 pounds of potash per acre and shall be incorporated into the soil by light disking, harrowing, or other acceptable methods immediately following the application.

3.5 SEEDING

3.5.1 General

Seed sown during the season between 1 March and 30 June, inclusive, shall consist of 15 pounds of Rye Grass and 15 pounds of Bermuda per acre. Seed sown during

the season between 1 September and 15 November, inclusive, shall consist of 15 pounds of Rye Grass and 15 pounds of Sericea Lespedeza per acre. A satisfactory method of sowing shall be employed, using approved mechanical power-drawn seeders, mechanical hand-seeders, broadcast-seeders, or other approved methods. When conditions are such by reason of drought, high winds, excessive moisture, or other factors that satisfactory results are not likely to be obtained, work shall be halted as directed and resumed only when conditions are favorable or when approved alternative or corrective measures and procedures have been effected. If inspection either during seeding operations or after there is a show of green indicates that areas have been left unplanted, additional seed shall be sown as directed.

3.5.2 Broadcast Seeding

Seed shall be broadcast with approved sowing equipment and distributed uniformly over the areas. Seed shall be covered lightly by brush harrow, spike-tooth harrow, chain harrow, cultipacker, or other approved device. Seed shall not be broadcast during windy weather.

3.5.3 Damage to Seeding

The Contractor shall be fully responsible for any damage to the seeded areas caused by his operations. Areas that become damaged as a result of poor workmanship or failure to meet the requirements of the specifications may be ordered to be repaired and reseeded to specification requirements, without additional cost to the Government.

3.6 APPLYING AND ANCHORING MULCH

Mulch shall be spread uniformly in a continuous blanket, using 2 tons per acre of straw mulch or 1,200 pounds per acre of wood cellulose fiber mulch. Straw mulch shall be spread either by hand or by a manure spreader or by a modified grain combine with straw-spreader attachment or by a blower-type mulch spreader. Mulching shall be started at the windward side of relatively flat areas, or at the upper part of a steep slope, and continued uniformly until the area is covered. The mulch shall not be bunched. Immediately following spreading, straw mulch shall be anchored to the soil by a V-type-wheel land packer, a scalloped-disk or other suitable equipment operated parallel to the embankment centerline. The number of passes needed, not to exceed three, will be determined by the Contracting Officer. Wood cellulose fiber mulch shall be applied with equipment conforming to the requirements of 3.3 above.

3.7 COMPACTING

Immediately after seeding operations have been completed, the surfaces shall be compacted by one pass of a cultipacker, corrugated roller, or other approved equipment weighing 100 to 160 pounds per linear foot of roller.

3.8 HYDRAULIC SLURRY METHOD

In lieu of spreading fertilizer, sowing seed, applying mulch, and compacting as specified hereinabove, the hydraulic slurry method of fertilizing, seeding, and mulching, or any combination thereof, may be used by the Contractor, except that in no event shall the mulch be applied prior to fertilizing and seeding. Equipment to be used for application of materials by the hydraulic slurry method shall conform to the requirements specified in 3.3 above.

--End of Section--

DIVISION 3 - CONCRETE

SECTION 03101

FORMWORK FOR CONCRETE

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SECTION 03101

FORMWORK FOR CONCRETE

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN CONCRETE INSTITUTE (ACI)

ACI 347R	(1994) Guide for Formwork for Concrete

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM C 31	(1991) Making and Curing Concrete Test Specimens in the Field
ASTM C 39	(1993a) Compressive Strength of Cylindrical Concrete Specimens
ASTM C 1077	(1995b) Standard Practice for Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation

1.2 DESIGN REQUIREMENTS

The design, engineering, and construction of the formwork shall be the responsibility of the Contractor. The formwork shall be designed for anticipated live and dead loads and shall comply with the tolerances specified in Section 03301 CAST-IN-PLACE STRUCTURAL CONCRETE paragraph 1.5 CONSTRUCTION TOLERANCES. However, for surfaces with an ACI Class A surface designation, the allowable deflection for facing material between studs, for studs between walers and walers between bracing shall be limited to 0.0025 times the span. The formwork shall be designed as a complete system with consideration given to the effects of cementitious materials and mixture additives such as fly ash, cement type, plasticizers, accelerators, retarders, air entrainment, and others. The adequacy of formwork design and construction shall be monitored prior to and during concrete placement as part of the Contractor's approved Quality Control Plan.

1.3 SUBMITTALS

Government approval is required for all submittals with a "GA" designation; submittals having

an "FIO" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Data

Materials; FIO.

Manufacturer's literature shall be submitted for plywood, concrete form hard board, form accessories, prefabricated forms, form.

SD-04 Drawings

Shop Drawings;GA.

Drawings and design computations for all formwork required shall be submitted at least 14 days either before fabrication on site or before delivery of prefabricated forms.

SD-08 Statements

Shop Drawings; GA
If reshoring is permitted, the method, including location, order, and time of erection and removal shall also be submitted for review.

SD-09 Reports

Inspection;GA.

The Contractor shall submit field inspection reports for concrete forms and embedded items.

1.4 SHOP DRAWINGS

The shop drawings and data submitted shall include the type, size, quantity, and strength of all materials of which the forms are made, the plan for jointing of facing panels, details affecting the appearance, and the assumed design values and loading conditions.

PART 2 PRODUCTS

2.1 MATERIALS

2.1.1 Forms and Form Liners

Forms and form liners shall be fabricated with facing materials that will produce a finish meeting the specified construction tolerance requirements and the following surface classifications as defined in ACI 347R.

2.1.1.1 Class "B" Finish

This class of finish shall apply to all surfaces except those specified to receive Class D. The sheathing shall be composed of tongue-and-groove or shiplap lumber, plywood conforming to NBS Product Standard PS 1, grade B-B concrete form, tempered concrete form hardboard, or steel. Steel lining on wood sheathing will not be permitted.

2.1.1.2 Class “D” Finish

This class of finish shall apply to all surfaces against which backfill will be placed. The sheathing may be of wood or steel.

2.1.2 Form Coating

Form coating shall be commercial formulation that will not bond with, stain, cause deterioration, or any other damage to concrete surfaces. The coating shall not impair subsequent treatment of concrete surfaces depending upon bond or adhesion nor impede the wetting of surfaces to be cured with water or curing compounds. If special form liners are to be used, the Contractor shall follow the recommendation of the form coating manufacturer.

2.2 ACCESSORIES

Ties and other similar form accessories to be partially or wholly embedded in the concrete shall be of a commercially manufactured type. After the ends or end fasteners have been removed, the embedded portion of metal ties shall terminate not less than 2 inches from any concrete surface either exposed to view or exposed to water. Removable tie rods shall not be allowed. Plastic snap ties may be used in locations where the surface will not be exposed to view. Form ties shall be constructed so that the ends or end fasteners can be removed without spalling the concrete.

PART 3 EXECUTION

3.1 INSTALLATION

3.1.1 Form Construction

Forms shall be constructed true to the structural design and required alignment. The form surface and joints shall be mortar tight and supported to achieve safe performance during construction, concrete placement, and form removal. The Contractor shall continuously monitor the alignment and stability of the forms during all phases to assure the finished product will meet the required surface class specified in paragraph 2.1.1 Forms and Form Liners and tolerances specified in paragraph 1.2 DESIGN REQUIREMENTS. Failure of any supporting surface either due to surface texture, deflection or form collapse shall be the responsibility of the Contractor as will the replacement or correction of unsatisfactory surfaces. When forms for continuous surfaces are placed in successive units, care shall be taken to fit the forms over the completed surface to obtain accurate alignment of the surface and to prevent leakage of mortar. Forms shall

not be re-used if there is any evidence of defects which would impair the quality of the resulting concrete surface. All surfaces of used forms shall be cleaned of mortar and any other foreign material before reuse.

3.1.2 Chamfering

All exposed joints, edges and external corners shall be chamfered by molding placed in the forms unless the drawings specifically state that chamfering is to be omitted or as otherwise specified. Chamfered joints shall not be permitted where earth or rockfill is placed in contact with concrete surfaces. Chamfered joints shall be terminated 12 inches outside the limit of the earth or rockfill so that the end of the chamfers will be clearly visible.

3.1.3 Coating

Forms for exposed or painted surfaces shall be coated with form oil or a form-release agent before the form or reinforcement is placed in final position. The coating shall be used as recommended in the manufacturer's instructions. Forms for unexposed surfaces may be wet with water in lieu of coating immediately before placing concrete, except that, in cold weather when freezing temperatures are anticipated, coating shall be mandatory. Surplus coating on form surfaces and coating on reinforcing steel and construction joints shall be removed before placing concrete.

3.2 FORM REMOVAL

Forms shall not be removed without approval. The minimal time required for concrete to reach a strength adequate for removal of formwork without risking the safety of workers or the quality of the concrete depends on a number of factors including, but not limited to, ambient temperature, concrete lift heights, type and amount of concrete admixture, and type and amount of cementitious material in the concrete. It is the responsibility of the Contractor to consider all applicable factors and leave the forms in place until it is safe to remove them. In any case forms shall not be removed unless the minimum time or minimum compressive strength requirements below are met, except as otherwise directed or specifically authorized. When conditions are such as to justify the requirement, forms will be required to remain in place for a longer period. All removal shall be accomplished in a manner which will prevent damage to the concrete and ensure the complete safety of the structure. Where forms support more than one element, the forms shall not be removed until the form removal criteria are met by all supported elements. Form removal shall be scheduled so that all necessary repairs can be performed as specified in Section 03301 CAST-IN-PLACE STRUCTURAL CONCRETE, paragraph 3.5.3 Formed Surface Repair. Evidence that concrete has gained sufficient strength to permit removal of forms shall be determined by tests on control cylinders. All control cylinders shall be stored in the structure or as near the structure as possible so they receive the same curing conditions and protection methods as given those portions of the structure they represent. Control cylinders shall be removed from the molds at an age of no more than 24 hours. All control cylinders shall be prepared and tested in accordance with ASTM C 31 and ASTM C 39 at the expense of the Contractor by an independent laboratory that complies with ASTM C 1077 and shall be tested within 4 hours after removal from the site.

3.2.1 Formwork Not Supporting Weight of Concrete

All type formwork not supporting the weight of concrete shall not be removed in less than 24 hours after concrete placement is completed.

3.2.2 Formwork Supporting Weight of Concrete

Formwork supporting weight of concrete and shoring shall not be removed until structural members have acquired sufficient strength to safely support their own weight and any construction or other superimposed loads to which the supported concrete may be subjected. As a minimum, forms shall be left in place until control concrete test cylinders indicate evidence the concrete has attained at least 70 percent of the compressive strength required for the structure in accordance with the quality and location requirements of Section 03301 CAST-IN-PLACE STRUCTURAL CONCRETE.

3.3 INSPECTION

Forms and embedded items shall be inspected in sufficient time prior to each concrete placement by the Contractor in order to certify to the Contracting Officer that they are ready to receive concrete. The results of each inspection shall be reported in writing.

--End of Section--

DIVISION 3 - CONCRETE

SECTION 03200

STEEL BARS AND ACCESSORIES FOR CONCRETE REINFORCEMENT

TABLE OF CONTENTS

SECTION 03200

STEEL BARS AND ACCESSORIES FOR CONCRETE REINFORCEMENT

PART 1 GENERAL

1.1 SCOPE

The work covered by this section consists of furnishing all equipment, materials, and labor for providing and placing steel bars and accessories for concrete reinforcement.

1.2 APPLICABLE PUBLICATIONS

The following publications of the issues listed below, but referred to thereafter by basic designation only, form a part of this specification to the extent indicated by the references thereto:

AMERICAN CONCRETE INSTITUTE (ACI) STANDARDS.

ACI 315-80 (R 1986)	Details and Detailing of Concrete Reinforcement
ACI 318/318R-89	Building Code Requirements for Reinforced Concrete

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) STANDARDS.

A 185-94	Steel Welded Wire Fabric, Plain for Concrete Reinforcement
A 370-97	Mechanical Testing of Steel Products
A 615/A615M-96a	Deformed and Plain Billet-Steel Bars for Concrete Reinforcement

AMERICAN WELDING SOCIETY (AWS) CODE.

D1.4-92	Structural Welding Code Reinforcing Steel

1.3 QUALITY CONTROL

The Contractor shall establish and maintain quality control for the work specified in this section to assure compliance with contract requirements and maintain records of his quality control for all construction operations including but not limited to the following:

(1) Materials

Conform to specification requirements.

(2) Installation

Conforms to specification requirements.

(3) Shop Drawings and Test Reports

Accuracy, detail, timeliness of submission.

A copy of these records and tests, as well as the records of corrective action taken, shall be furnished the Government.

1.4 QUALITY ASSURANCE

1.4.1 General

The Contractor shall have required material tests performed by an approved laboratory and certified to demonstrate that the materials are in conformance with the specifications. Tests shall be performed and certified at the Contractor's expense.

1.4.2 Reinforcement Steel Tests

Mechanical testing of steel shall be in accordance with ASTM A 370 except as otherwise specified herein or required by the material specifications. Tension tests shall be performed on full cross-section specimens, using a gage length that spans the extremities of specimens, with welds or sleeves included. The ladle analysis shall show the percentages of carbon, phosphorous, manganese, and sulfur present in the steel.

1.5 SUBMITTALS

1.5.1 General

The Contractor shall submit the following items to the Contracting Officer for approval.

1.5.2 Shop Drawings

Shop drawings shall be in accordance with specified requirements and include the following:

1.5.2.1 Steel Schedules

Reinforcement steel schedules showing quantity, size, shape, dimensions, and bending details.

1.5.2.2 Bar Supports

Details for bar supports showing types, sizes, spacing, and sequence.

1.5.3 Test Reports

Certified test reports of reinforcement steel showing that the steel complies with the applicable specifications shall be furnished for each steel shipment and identified with specific lots prior to placement. Four copies of the ladle analysis shall be provided for each lot of steel and the Contractor shall certify that the steel furnished conforms to the ladle analysis.

PART 2 PRODUCTS

2.1 MATERIALS

2.1.1 Steel Bars

Billet-steel bars shall be deformed bars conforming to ASTM A 615, Grade 60, size and length as indicated on the drawings.

2.1.2 Accessories

2.1.2.1 Bar Supports

Bar supports shall conform to ACI 315. Bar supports for formed surfaces exposed to view or to be painted shall be plastic protected wire, or stainless steel.

2.1.2.2 Wire Ties

Wire ties shall be 16-gage or heavier black annealed wire. Ties for epoxy coated bars shall be vinyl coated or epoxy coated.

PART 3 EXECUTION

3.1 PLACEMENT

3.1.1 General

Reinforcement steel and accessories shall be placed as specified and as shown on contract drawings and approved shop drawings. Placement details of steel and accessories not specified or shown on the drawings shall be in accordance with ACI 315 or ACI 318 or as directed by the Contracting Officer. Steel shall be fabricated to shapes and dimensions shown, placed where indicated within specified tolerances, and adequately supported during concrete placement. At the time of concrete placement all steel shall be free from loose, flaky rust, scale (except tight mill scale), mud, oil, grease, or any other coating that might reduce the bond with the concrete.

3.1.2 Hooks and Bends

Steel shall be mill bent unless otherwise noted on drawings. All steel shall be bent cold unless otherwise authorized. No steel bars shall be bent after being partially embedded in concrete unless indicated on the drawings or otherwise authorized.

3.1.3 Welding

Welding of steel will be permitted only where indicated on the drawings or as otherwise directed by the Contracting Officer. Welding shall be performed in accordance with AWS D1.4, except where otherwise specified or indicated on the drawings.

3.1.4 Placing Tolerances

3.1.4.1 Spacing

The spacing between adjacent bars and the distance between layers may not vary from the indicated position by more than one bar diameter nor more than one inch.

3.1.4.2 Concrete Cover

The minimum concrete cover of main reinforcement steel shall be as shown on the drawings. The allowable variation for minimum cover shall be as follows:

MINIMUM COVER	VARIATION
6"	+ 1/2"
4"	+ 1/4"
3"	+ 1/4"
2"	+ 1/4"
1-1/2"	+ 1/4"
1"	+ 1/8"
3/4"	+ 1/8"

3.1.5 Splicing

3.1.5.1 General

Splices in steel shall be made only as required. Bars may be spliced at alternate or additional locations at no additional cost to the Government, subject to the approval of the Contracting Officer.

3.1.5.2 Lap Splices

Lap splices may be used except as noted on the drawings. Lapped bars may be placed in contact and securely tied or spaced transversely apart to permit the embedment of the entire surface of each bar in concrete. Lapped bars shall not be spaced farther apart than one-fifth the required length of lap or 6-inches.

--End of Section--

DIVISION 3 - CONCRETE

SECTION 03230

STRESSING STRANDS AND ACCESSORIES FOR PRESTRESSED CONCRETE

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SECTION 03230

STRESSING STRANDS AND ACCESSORIES FOR PRESTRESSED CONCRETE

PART 1 GENERAL

1.1 SCOPE

The work covered by this section consists of furnishing all equipment, materials, techniques and labor for providing, placing and stressing strands and accessories for the construction of prestressed concrete for the concrete piles.

1.2 RELATED WORK SPECIFIED ELSEWHERE

Requirements for concrete work as specified in other sections of DIVISION 3 - CONCRETE and SECTION 03430 - PILING; CONCRETE, PRECAST, PRESTRESSED.

1.3 APPLICABLE PUBLICATIONS

The following publications of the issues listed below, but referred to elsewhere in this section by basic designation only, form a part of this specification to the extent indicated by the references thereto:

AMERICAN CONCRETE INSTITUTE (ACI) STANDARDS.

ACI 315-80 (R 1986)	Details and Detailing of Concrete Reinforcement
ACI 318/318RM-92	Building Code Requirements for Reinforced Concrete and Commentary

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) STANDARDS.

A 416/A416M-96	Steel Strand, Uncoated Seven-Wire for Prestressed Concrete

PRESTRESSED CONCRETE INSTITUTE (PCI).

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) (1990).

Standard Specifications for Highway Bridges, Fifteenth Edition 1992.

ARKANSAS STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (1993 EDITION).

1.4 QUALITY CONTROL

The Contractor shall establish and maintain quality control for the work specified in this section to assure compliance with contract requirements and maintain records of his quality control for all construction operations including but not limited to the following:

(1) Materials

Conform to the specifications and drawings.

(2) Installation

Conforms to the specifications and drawings.

(3) Submittals

Timely submission, review for accuracy.

A copy of these records and tests, as well as the records of corrective action taken, shall be furnished the Government.

1.5 QUALITY ASSURANCE

The Contractor shall have required material tests performed on stressing strands and accessories by an approved laboratory to demonstrate that the materials are in conformance with the specifications. These tests shall be at the Contractor's expense.

1.6 SUBMITTALS

1.6.1 Shop Drawings

The Contractor shall prepare and submit to the Contracting Officer for approval complete shop drawings in accordance with specified requirements. Shop drawings shall show complete details including type and size of prestressing elements and anchorages, erection methods and details, sequence of stressing and complete stressing calculations.

1.6.2 Test Reports

Certified test reports of required material tests shall be submitted to the Contracting Officer by the Contractor for each shipment and shall be identified with specified lots.

1.6.3 Disposition Records

A system of identification which shows the disposition of specific lots of approved tested materials in the work shall be established and submitted to the Contracting Officer before completion of the contract.

1.6.4 Equipment Descriptions and Certifications

Descriptions of tensioning jacks, gages, dynamometers, load cells or other devices for measuring stressing load, certified calibration records for each set of jacking equipment, and testing curves for stress measurement gages which show that gages have been calibrated for the jacks for which they are used shall be submitted for approval prior to the start of the tensioning operations.

1.6.5 Tensioning Records

Complete tensioning records as described in 3.2 below shall be submitted to the Contracting Officer after the tensioning is completed.

1.7 DELIVERY, STORAGE, AND HANDLING OF MATERIALS

Materials shall be suitably wrapped, packaged or covered at the factory or shop to prevent being affected by dirt, water and rust. Materials shall be protected against abrasion or damage during shipment and handling. Materials stored at the site shall be placed above ground on a well supported platform and covered.

PART 2 PRODUCTS

2.1 MATERIALS

2.1.1 General

Prestressing steels shall be clean and free of loose rust, scale, and pitting. A light oxide is permissible.

2.1.2 Seven-Wire Stress-Relieved Strand and Strand Assemblies

Prestressing steel shall be seven-wire uncoated stress-relieved strand and strand assemblies conforming to the requirements of ASTM A416/416M, strength and size as indicated on the drawings. Strand assemblies may be either shop or field assembled with anchor fittings positively attached to strands. Splicing of strands will not be allowed.

2.1.3 Anchorages and Couplers

Anchorages and couplers shall be subject to the approval of the Contracting Officer, shall be of metal of proven corrosion resistance and compatibility with the stressing strands, and shall be capable of fully developing the minimum guaranteed ultimate strength of strands without excessive slip. Anchorages shall be the button-head, wedge, nut and thread, grip nut, thread-bar, threaded plate or other approved type provided with bearing plates, bars, rings, bells or other positive-attaching alloy steel anchor fittings.

PART 3 EXECUTION

3.1 INSTALLATION

3.1.1 General

Stressing strands and accessories shall be installed or placed as specified and as shown on contract and approved shop drawings. Placement details of stressing strands and accessories not specified or shown on the drawings shall be in accordance with ACI 315 or ACI 318. Stressing strands shall be fabricated to shapes and dimensions shown and shall be placed where indicated within specified tolerances and adequately supported during concrete placement. Immediately prior to installation, the protective coverings and wrappings shall be removed and each stressing strand shall be closely inspected to see that nicks, scoring or pits do not exist. Welding will not be permitted near or adjacent to stressing strands. Stressing strands shall not be placed until all welding has been completed on supports or any part which might be in contact with the strands.

3.1.2 Anchorages

Anchorages must be set in a plane normal to the axis of the strands such that uniform bearing is assured. Wedge-type anchors shall not be used in inaccessible locations. Anchorages and anchor fittings shall be permanently protected against

corrosion.

3.1.3 Tensioning of Strands

3.1.3.1 General

The stress induced in the strands by any method of tensioning shall be determined independently by both (1) measurement of strand elongation and (2) direct measurement of force using a pressure gage or load cell. The results of these two measurements shall check each other and the theoretical values within 5 percent. If they do not, the operation shall be carefully checked and the source of error determined and corrected before proceeding further. The concrete strength at transfer of stress shall be adequate for the requirements of the anchorages or for transfer through bond as well as meet camber or deflection requirements. In any case, concrete cylinder tests shall indicate a breaking strength of at least 4,000 pounds per square inch before transfer. Safety measures shall be taken by the Contractor to prevent accidental injury caused by failure of a stressing strand or component. The exposed ends of stressing strands and anchorages shall be protected from damage during stressing operations to prevent failure.

3.1.3.2 Pretensioning

Strands may be tensioned by jacking of groups or may be tensioned individually by means of a single-strand jack. Before final tensioning, all strands shall be brought to a uniform initial tension between 5 and 20 percent of the final force per strand per 200 feet of bed. The force corresponding to the initial tension shall be measured by a dynamometer or other approved method to aid in determining the final elongation. After this initial tensioning, the strands shall be stressed to the total tension required by the plans using hydraulic or mechanical equipment with gages or dynamometers graduated and calibrated to accurately determine the load applied. Cable stress shall be maintained between anchorages until the concrete has reached a compressive strength of 4,000 pounds per square inch.

3.1.3.3 Detensioning

3.1.3.3.1 General

Forces from pretensioned strands shall be transferred to the concrete by either the multiple-strand release or the single-strand release method. The stress transfer shall not be performed until concrete strength, as indicated by test cylinders, has reached the specified transfer strength. If concrete has been heat-cured, the detensioning shall be done immediately following the curing period while the concrete is still warm and moist. During detensioning, the prestressing forces shall be kept nearly symmetrical about the vertical axis of the member and shall be applied in a manner that will minimize sudden loading. Eccentricity about the vertical axis shall be limited to one strand.

3.1.3.3.2 Multiple-Strand Release

In this method, all strands shall be detensioned simultaneously and the load transferred gradually to the concrete by hydraulic jacking.

3.1.3.3.3 Single-Strand Release

In this method, all strands shall be detensioned by slow heat-cutting the strands in accordance with a pattern and schedule as approved by the Contracting Officer. The strands shall be heated using a low-oxygen flame until the metal gradually

loses its strength, causing release of the strands to occur gradually. The low-oxygen flame shall be played along the strand for a minimum of five inches. Strands shall be so heated that the failure of the first wire in each strand will occur after the torch has been applied for a minimum of five seconds.

3.1.4 Accuracy of Stress and Elongation Measurement

3.1.4.1 Stress Measurement

Hydraulic gages, dynamometers, load cells or other devices for measuring stressing load shall have an accuracy of reading within two percent. Gages shall be calibrated for the jacks for which they are used. Recalibration shall be performed at any time that a gaging system shows indication of erratic results in the opinion of the Contracting Officer and, in any case, at intervals not greater than 12 months. Gages shall indicate loads directly in pounds or be accompanied by a chart which converts dial readings into pounds.

3.1.4.2 Elongation Measurement

After the initial force has been applied to a strand, reference points for measuring elongation due to additional tensioning forces shall be established. They will be located according to the method of tensioning and type of equipment. The system used shall be capable of measuring the true elongation $\pm$ 1/16 inch.

3.2 INSPECTION

The Contractor’s facilities shall be open for inspection by the Contracting Officer at any time. The Contractor shall maintain full and accurate records of all materials incorporated into the work. Complete tensioning records shall be maintained by the Contractor showing date of tensioning, description, location and identification of the strands, manufacturer and size of strand, identification of jacking equipment, final and initial design load for each strand; theoretical elongation per strand, actual tensioning load per strand, and actual elongation per strand.

--End of Section--

DIVISION 3 - CONCRETE

SECTION 03301
CAST-IN-PLACE STRUCTURAL CONCRETE

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SECTION 03301

CAST-IN-PLACE STRUCTURAL CONCRETE

PART 1 GENERAL

1.1 SCOPE

The work covered by this section consists of furnishing all material and equipment and performing all labor for cast-in-place concrete.

1.2 APPLICABLE PUBLICATIONS

The following publications of the issues listed below, but referred to thereafter by basic designation only, form a part of this specifications to the extent indicated by the references thereto:

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) WITH CORRESPONDING CRD STANDARD INDICATED WHERE AVAILABLE.

C 31/C31M-96 (CRD-C 11)	Making and Curing Concrete Test Specimens in the Field
C 33-93 (CRD-C 133)	Concrete Aggregates
C 39-96 (CRD-C 14)	Compressive Strength of Cylindrical Concrete Specimens
C 94-96 and Ed Cmt 1 (CRD-C 31)	Ready-Mixed Concrete
C 143-90a	Slump for Hydraulic Cement Concrete
C 150-97 (CRD-C 201)	Portland Cement
C 171-97a (CRD-C 310)	Sheet Materials for Curing Concrete
C 172-90 (CRD-C 4)	Sampling Freshly Mixed Concrete
C 231-97 (CRD-C 41)	Air Content of Freshly Mixed Concrete by the Pressure Method
C 260-95 (CRD-C 13)	Air-Entraining Admixtures for Concrete
C 494-92 (CRD-C 87)	Chemical Admixtures for Concrete
C 566-97	Total Moisture Content of Aggregate

(CRD-C 113)	by Drying
D 75-87 and Ed Cmt 1 (R 1992) (CRD-C 155)	Sampling Aggregates
E 329-95c (CRD-C 500)	Agencies Engaged in the Testing and/or Inspection of Materials used in Construction

U.S. DEPARTMENT OF COMMERCE, NATIONAL BUREAU OF STANDARDS (NBS) HANDBOOK

H44	Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices (1986)

AMERICAN CONCRETE INSTITUTE (ACI)

ACI 305R-91	Hot Weather Concreting

U.S. ARMY CORPS OF ENGINEERS HANDBOOK FOR CEMENT AND CON-CRETE (CRD)

CRD-C 94-95	Surface Retarders
CRD-C 143-62	Meters for Automatic Indication of Moisture in Fine Aggregate
CRD-C 300-90	Membrane-Forming Compounds for Curing Concrete
CRD-C 400-63	Water for Use in Mixing or Curing Concrete

1.3 QUALITY ASSURANCE

The Contractor will sample and test aggregates and concrete to determine compliance with the specifications. The Contractor shall provide facilities and labor as may be necessary for procurement of representative test samples. Samples of aggregates will be obtained at the point of batching in accordance with ASTM D 75. Concrete will be sampled in accordance with ASTM C 172. Slump and air content will be determined in accordance with ASTM C 231. Compression test specimens will be made and laboratory cured in accordance with ASTM C 31 and compression test specimens tested in accordance with ASTM C 39.

1.4 EVALUATION AND ACCEPTANCE

1.4.1 Construction Tolerances

Variation in alignment, grade and dimensions of the structures from the established alignment, grade and dimensions shown on the drawings shall be minus 1/4-inch and plus 1/2-inch.

1.4.2 Surface Requirements

The surface requirements for the classes of finish required by SECTION 03100, paragraph 2.1 shall be as hereinafter specified. Allowable irregularities are designated "abrupt" or "gradual" for purposes of providing for surface variations. Offsets resulting from displaced, misplaced or mismatched forms, or sheathing, or by loose knots in sheathing, or other similar form defects, shall be considered "abrupt" irregularities. Irregularities resulting from warping, unplaneness or similar uniform variations from planeness, or true curvature, shall be considered "gradual" irregularities. "Gradual" irregularities will be checked for compliance with the prescribed limits with a 5-foot template, consisting of a straightedge for plane surfaces and a shaped template for curved or warped surfaces. In measuring irregularities, the straightedge or template may be placed anywhere on the surface in any direction, with the testing edge held parallel to the intended surface.

	Maximum Irregularities	
Class of Finish	Abrupt, inches	Gradual, inches
B	1/4	1/2
D	1	1

1.4.3 Appearance

Permanently exposed surfaces shall be cleaned, if stained or otherwise discolored, by a method which does not harm the concrete and which is approved by the Contracting Officer.

1.5 SUBMITTALS

1.5.1 Test Reports

1.5.1.1 Concrete Mixture Proportions

Concrete mixture proportions shall be determined by the Contractor and submitted for information only. The proportions of all ingredients and nominal maximum coarse aggregate size that will be used in the manufacture of the concrete shall be stated. Proportions shall indicate weight of cement and water and weight of aggregates in a saturated surface-dry condition. The submission shall be accompanied by test reports from a laboratory complying with ASTM E 329 which show that proportions thus selected will produce concrete of the quality indicated. No substitution shall be made in the source or type of materials used in the work without additional tests to show that the new materials and quality of concrete are satisfactory.

1.5.1.2 Cement

Cement will be accepted on the basis of manufacturer’s certification of compliance, accompanied by mill test reports that materials meet the requirements of the specification under which it is furnished. Certification and mill test reports shall identify the particular lot furnished. No cement shall be used until notice of acceptance has been given by the Contracting Officer. Cement will be subject to check testing from samples obtained at the mill, at transfer points or at the project site, as scheduled by the Contracting Officer, and such sampling will be by or under the supervision of the Government at its expense.

Material not meeting specifications shall be promptly removed from the site of work.

1.5.2 Manufacturers' Certificates

1.5.2.1 Accelerating Admixture

Accelerating admixture shall be certified for compliance with all specification requirements.

1.5.2.2 Impervious Sheet Curing Materials

Impervious sheet curing materials shall be certified for compliance with all specification requirements.

1.5.2.3 Air-Entraining Admixture

Air-entraining admixture shall be certified for compliance with all specification requirements.

1.5.2.4 Water-Reducing Admixture

Water-reducing admixture shall be certified for compliance with all specification requirements.

1.5.2.5 Curing Compound

Curing compound shall be certified for compliance with all specification requirements.

1.5.3 Hot-Weather and Cold-Weather Requirements

1.5.3.1 Cold-Weather Requirements

If concrete is to be placed under cold weather conditions, the proposed materials, methods and protection shall be in accordance with the requirements of 3.4.3 and 3.6.5 of this section for approval by the Contracting Officer.

1.5.3.2 Hot-Weather Requirements

If concrete is to be placed under hot weather conditions, the proposed materials and methods shall be in accordance with the requirements of 3.4.4 and 3.5.1.2 below for approval by the Contracting Officer.

1.6 QUALITY CONTROL

The Contractor shall establish and maintain quality control for the work specified in this section to assure compliance with contract requirements and maintain records of his quality control for all construction operations including but not limited to the following:

(1) Materials

Conform to the specifications.

(2) Construction

Mixing, placing, finishing, curing, and protection.

A copy of these records and tests, as well as the records of corrective action taken, shall be furnished the Government.

PART 2 PRODUCTS

2.1 MATERIALS

2.1.1 Cementitious Materials

2.1.1.1 General

Cementitious materials shall be portland cement or portland-pozzolan cement and shall conform to appropriate specifications listed in 2.1.1.2.

2.1.1.2 Portland Cement

ASTM C 150, Type I, II or III except that the maximum amount of tricalcium aluminate in Type I cement shall be 15 percent.

2.1.2 Aggregates

Fine and coarse aggregates shall conform to the applicable requirements of ASTM C 33. Coarse aggregate shall conform to grading requirements for sizes 467, 57 or 67, as appropriate. The nominal maximum coarse aggregate size shall be as listed in 2.2.2.

2.1.3 Admixtures

2.1.3.1 General

Admixtures to be used, when required or permitted, shall conform to the appropriate specification listed in 2.1.3.2, 2.1.3.3, and 2.1.3.4.

2.1.3.2 Air-Entraining Admixture

ASTM C 260; however, air-entraining admixture which has been in storage at the project site for longer than 6 months or which has been subjected to freezing shall not be used.

2.1.3.3 Accelerating Admixture

Accelerating admixture shall conform to the requirements as specified in ASTM C494, type C.

2.1.3.4 Water Reducing or Retarding Admixtures

ASTM C 494, Type A, B or D.

2.1.4 Curing Materials

2.1.4.1 Impervious Sheet Materials

ASTM C 171, type optional except polyethylene film, if used, shall be white opaque.

2.1.4.2 Membrane-Forming Curing Compound

CRD-C 300, pigmented or non-pigmented as required in 3.6.3 below. Non-pigmented

compound shall contain a fugitive dye.

2.1.5 Water

Water for mixing shall be fresh, clean, drinkable, and free of injurious amounts of oil, acid, salt and alkali except that undrinkable water may be used if it meets the requirements of CRD-C 400.

2.2 MIXTURE PROPORTIONING

2.2.1 Quality

2.2.1.1 Strength

Specified minimum compressive strength for cast-in-place concrete shall be 3,000 psi at 28 days.

2.2.1.2 Maximum Water-Cement Ratio

Maximum water-cement ratio shall be 0.55 by weight.

2.2.2 Nominal Maximum Size Coarse Aggregate

Nominal maximum size coarse aggregate shall be 1-1/2-inch or 1-inch except 3/4-inch nominal maximum size coarse aggregate shall be used when any of the following conditions exist: the narrowest dimension between sides of forms is less than 7-1/2 inches, the depth of the slab is less than 4-1/2 inches or when the minimum clear spacing between forms and/or reinforcing is less than 2 inches. Furthermore, 3/4-inch nominal maximum size coarse aggregate may be used in precast concrete.

2.2.3 Air Content

Air content as determined by ASTM C 231 shall be 5.0 percent $\pm$ 1.5 percent, except that when nominal maximum size coarse aggregate is 3/4-inch it shall be 6.0 percent $\pm$ 1.5 percent.

2.2.4 Slump

The slump shall be determined in accordance with ASTM C 143 and shall be within the range of 1 inch - 4 inches. Where placement by pump is approved, the slump shall not exceed 6 inches and shall remain within a 3-inch band.

PART 3 EXECUTION

3.1 PRODUCTION OF CONCRETE

3.1.1 Capacity

The batching, mixing and placing equipment shall have a capacity of at least 30 cubic yards per hour.

3.1.2 Batching Plant

3.1.2.1 Equipment

The batching controls shall be partially automatic or manual. Separate bins or compartments shall be provided for each size group of aggregate and cement. Aggregate shall be weighed either in separate weigh batchers with individual

scales or cumulatively in one weigh batcher on one scale. Aggregate shall not be weighed in the same batcher with cement. If measured by weight, water shall not be weighed cumulatively with another ingredient. Water batcher filling and discharging valves shall be so interlocked that the discharge valve cannot be opened before the filling valve is fully closed. An accurate mechanical device for measuring and dispensing each admixture shall be provided. Each dispenser shall be interlocked with the batching and discharging operation of the water so that each admixture is separately batched and discharged automatically in a manner to obtain uniform distribution throughout the batch in the specified mixing period. Where use of truck mixers makes this requirement impracticable, the admixture dispensers shall be interlocked with the sand batcher. Admixtures will not be combined prior to introduction in water or sand. The plant shall be arranged so as to facilitate the inspection of all operations at all times. Suitable facilities shall be provided for obtaining representative samples of aggregates from each bin or compartment.

3.1.2.2 Scales

The weighing equipment shall conform to the applicable requirements of NBS Handbook 44, except that the accuracy shall be plus or minus 0.2 percent of scale capacity. The Contractor shall provide standard test weights and any other auxiliary equipment required for checking the operating performance of each scale or other measuring device. Scales and other measuring devices shall be tested for accuracy in the presence of a representative of the Contracting Officer prior to batching; however, a certified test report performed by an approved testing company within the past year will be accepted in lieu of the above test.

3.1.2.3 Batching Tolerances

3.1.2.3.1 Weighing Tolerances

Whichever of the following tolerances is greater shall apply, based on required scale reading.

Material	Percent of Required Weight	Percent of Scale Capacity
Cementitious Materials	±1	+0.3
Aggregate	±2	+0.3
Water	±1	+0.3
Admixture	±3	+0.3

3.1.2.3.2 Volumetric Tolerances

For volumetric batching equipment the following tolerances shall apply to the required volume of material being batched:

Water: Plus or minus 1 percent.
Admixtures: Plus or minus 3 percent.

3.1.2.4 Moisture Control

The plant shall be capable of ready adjustment to compensate for the varying moisture contents of the aggregates, and to change the weights of the materials being batched. The Contractor shall perform at least one moisture content test

on each type of aggregate each day that concrete is placed. Additional tests shall be performed by the Contractor if so directed by the Contracting Officer. Tests shall be performed in accordance with ASTM C 566; however, tests on fine aggregate may be made with an electric moisture meter complying with the provisions of CRD-C 143 provided the sensing element is arranged so that measurement is made near the batcher charging gate of the sand bin or in the sand batcher.

3.1.3 Mixers

3.1.3.1 General

The mixers shall not be charged in excess of the capacity recommended by the manufacturer. The mixers shall be operated at the drum or mixing blade speed designated by the manufacturer. The mixers shall be maintained in satisfactory operating condition, and the mixer drums shall be kept free of hardened concrete. Should any mixer at any time produce unsatisfactory results, its use shall be promptly discontinued until it is repaired.

3.1.3.2 Concrete Plant Mixers

Concrete plant mixers shall be tilting, non-tilting, horizontal-shaft or vertical-shaft type and shall be provided with an acceptable device to lock the discharge mechanism until the required mixing time has elapsed. The mixing time shall conform to 3.1.3.3 below.

3.1.3.3 Truck Mixers

Truck mixers, the mixing of concrete therein, and concrete uniformity, shall conform to the requirements of ASTM C 94. A truck mixer may be used either for complete mixing (transit-mixed) or to finish the partial mixing done in a stationary mixer (shrink-mixed). Each truck shall be equipped with two counters from which it will be possible to determine the number of revolutions at mixing speed and the number of revolutions at agitating speed.

3.2 CONVEYING EQUIPMENT

3.2.1 General

Concrete shall be conveyed from mixer to forms as rapidly as practicable and within the time interval in 3.4.2 below by methods which will prevent segregation or loss of ingredients. Any concrete transferred from one conveying device to another shall be passed through a hopper which is conical in shape and shall not be dropped vertically more than five feet, except where suitable equipment is provided to prevent segregation and where specifically authorized. Telephonic or other satisfactory means of rapid communication between the mixing plant and the forms in which concrete is being placed shall be provided and available for use by Government inspectors.

3.2.2 Buckets

The interior hopper slope shall be not less than 58 degrees from the horizontal, the minimum dimension of the clear gate opening shall be at least 5 times the nominal maximum size aggregate and the area of the gate opening shall be not less than two square feet. The maximum dimension of the gate opening shall not be greater than twice the minimum dimension. The bucket gates shall be essentially grout tight when closed and may be manually, pneumatically or hydraulically operated, except that buckets larger than 2 cubic yards shall not be manually operated. The design of the bucket shall provide means for positive regulation

of the amount and rate of deposit of concrete in each dumping position.

3.2.3 Transfer Hoppers

Concrete may be charged into non-agitating hoppers for transfer to other conveying devices. Transfer hoppers shall be capable of receiving concrete directly from delivery vehicles, and have conical-shaped discharge features. The machine shall be equipped with a hydraulically-operated gate and with a means of external vibration to effect complete and facile discharge. Concrete shall not be held in non-agitating transfer hoppers more than 30 minutes.

3.2.4 Trucks

Truck mixers operating at agitating speed or truck agitators used for transporting plant-mixed concrete shall conform to the requirements of ASTM C 94. Non-agitating equipment may be used for transporting plant-mixed concrete over a smooth road when hauling time is less than 15 minutes. Bodies of non-agitating equipment shall be smooth, watertight, metal containers equipped with gates that will permit the discharge of the concrete.

3.2.5 Chutes

When concrete can be placed directly from a truck mixer, agitator or non-agitating equipment, the chutes attached to this equipment may be used. A discharge deflector shall be used when required by the Contracting Officer. Separate chutes and other similar equipment will not be permitted for conveying concrete except when specifically approved.

3.2.6 Pump Placement

Concrete may be conveyed by positive displacement pump when approved by the Contracting Officer. The pumping equipment shall be piston or squeeze pressure type. The pipeline shall be rigid steel pipe or heavy duty flexible hose. The inside diameter of the pipe shall be at least three times the nominal maximum size coarse aggregate in the concrete mixture to be pumped but not less than 4 inches. The maximum size coarse aggregate will not be reduced to accommodate the pumps. The distance to be pumped shall not exceed limits recommended by the pump manufacturer. The concrete shall be supplied to the concrete pump continuously. When pumping is completed, concrete remaining in the pipeline shall be ejected without contamination of concrete in place. After each operation, equipment shall be thoroughly cleaned, and flushing water shall be wasted outside of the forms.

3.3 PREPARATION FOR PLACING

3.3.1 Embedded Items

Before placing concrete, care shall be taken to determine that all embedded items are firmly and securely fastened in place as indicated on the drawings, or required. Embedded items shall be free of oil and other foreign matter such as loose coatings or rust, paint and scale. The embedding of wood in concrete will be permitted only when specifically authorized or directed. Voids in sleeves, inserts and anchor slots shall be filled temporarily with readily removable materials to prevent the entry of concrete into voids.

3.3.2 Concrete on Earth Foundations

Earth surfaces upon which concrete is to be placed shall be clean, damp, and free

from frost, ice, and standing or running water. Prior to placing concrete the earth foundation shall have been compacted to the satisfaction of and approved by the Contracting Officer.

3.3.3 Construction Joint Treatment

3.3.3.1 General

Concrete surfaces to which other concrete is to be bonded shall be prepared for receiving the next lift or adjacent concrete by cleaning with either air-water cutting, sandblasting, high pressure water jet, or other approved method; however, only approved wet sandblasting equipment shall be provided for wet sandblasting operations.

3.3.3.2 Cleaning

3.3.3.2.1 Air-Water Cutting

Air-water cutting of a construction joint shall be performed at the proper time and only on horizontal construction joints. The surface shall be cut with an air-water jet to remove all laitance and to expose clean, sound fine aggregate, but not so as to undercut the edges of the larger particles of aggregate. The air pressure used in the jet shall be 100 psi plus or minus 10 psi, and the water pressure shall be just sufficient to bring the water into effective influence of the air pressure. When approved by the Contracting Officer, a retarder complying with the requirements of CRD C 94 may be applied to the surface of the lift in order to prolong the period of time during which air-water cutting is effective. Prior to receiving approval, the Contractor shall furnish samples of the material to be used and shall demonstrate the method to be used in applications. After cutting, the surface shall be washed and rinsed as long as there is any trace of cloudiness of the wash water. The surface shall again be washed just prior to placing the succeeding lift. Where necessary to remove accumulated laitance, coatings, stains, debris, and other foreign material, sandblasting will be required as the last operation before placing the next lift.

3.3.3.2.2 High-Pressure Water Jet

A stream of water under a pressure of not less than 3000 psi may be used for cleaning. Its use shall be delayed until the concrete is sufficiently hard so that only the surface skin or mortar is removed and there is no undercutting of coarse aggregate particles. Where the cleaning occurs more than two days prior to placing the next lift or where the work in the area subsequent to the cleaning causes dirt or debris to be deposited on the surface, the surface shall be cleaned again as the last operation prior to placing the next lift. If the water jet is incapable of a satisfactory cleaning, the surface shall be cleaned by sandblasting.

3.3.3.2.3 Sandblasting

When employed in the preparation of construction joints, sandblasting shall be performed as the final operation completed before placing the following lift. The operation shall be continued until all accumulated laitance, coatings, stains, debris, and other foreign materials are removed. The surface of the concrete shall then be washed thoroughly to remove all loose materials. The surface shall again be washed just prior to placing the succeeding lift.

3.3.3.2.4 Waste Disposal

The method used in disposing of waste water employed in cutting, washing and rinsing of concrete surfaces shall be such that the waste water does not stain, discolor, or affect exposed surfaces of the structures, or damage the environment of the project area. Method of disposal shall be subject to approval by the Contracting Officer.

3.4 PLACING

3.4.1 General

Concrete placement will not be permitted when, in the opinion of the Contracting Officer, weather conditions prevent proper placement and consolidation. Concrete shall be deposited as close as possible to its final position in the forms, and in so depositing there shall be no vertical drop greater than five feet. Depositing of the concrete shall be so regulated that it may be effectively consolidated in horizontal layers 1-1/2 feet or less in thickness with a minimum of lateral movement. The amount deposited in each location shall be that which can be readily and thoroughly consolidated. The surfaces of construction joints shall be kept continuously wet for the first twelve hours during the twenty-four hour period prior to placing concrete. Free water shall be removed prior to placement of concrete. Sufficient placing capacity shall be provided so that concrete placement can be kept plastic and free of cold joints while concrete is being placed. All panel joints must be mortar tight.

3.4.2 Time Interval Between Mixing and Placing

Concrete shall be placed within thirty minutes after discharge into non-agitating equipment. When concrete is truck mixed or when a truck mixer or agitator is used for transporting concrete mixed by a concrete plant mixer, the concrete shall be delivered to the site of the work and placed in the forms within 1-1/2 hours after introduction of the cement to the aggregates. When the length of haul makes it impossible to deliver truck mixed concrete within these time limits, batching of cement and a portion of the mixing water shall be delayed until the truck mixer is at or near the construction site. Not more than 80 percent of the water and all other materials except cement shall be batched at the distant batch plant and transported to the cement batcher without mixing.

3.4.3 Cold-Weather Placing

Concrete shall not be placed without a procedure approved in accordance with 1.5.3.1 above when the concrete is likely to be subjected to freezing temperatures before the expiration of the curing period. The ambient temperature of the space adjacent to the concrete placement and surfaces to receive concrete shall be above 32 degrees F. The placing temperature of the concrete having a minimum dimension less than 12 inches shall be between 60 degrees and 75 degrees F. The placing temperature of the concrete having a minimum dimension greater than 12 inches shall be between 50 degrees and 75 degrees F. Heating of the mixing water or aggregates will be required to regulate the concrete placing temperatures. Materials entering the mixer shall be free from ice, snow or frozen lumps. Salt, chemicals or other materials shall not be mixed with the concrete to prevent freezing, except that calcium chloride may be used as an accelerator.

3.4.4 Hot-Weather Placing

Concrete shall be properly placed and finished with approved procedures in accordance with 1.5.3.2 above. The concrete placing temperature shall not exceed 85 degrees F. Cooling of the mixing water and/or aggregates will be required to obtain an adequate placing temperature. An approved retarder may be used to

facilitate placing and finishing. Steel forms and reinforcement shall be cooled prior to concrete placement when steel temperatures are greater than 120 degrees F. Conveying and placing equipment shall be cooled if necessary to maintain proper concrete placing temperature.

3.4.5 Consolidation

Immediately after placing, each layer of concrete shall be consolidated by internal vibrating equipment. Vibrators will not be used to transport concrete within the forms. Hand spading may be required if necessary with internal vibration along formed surfaces permanently exposed to view. Mechanical screeds as approved by the Contracting Officer may be used. Form or surface vibrators shall not be used unless specifically approved. Vibrators of the proper size, frequency and amplitude shall be used for the type of work being performed in conformance with the following requirements:

Application	Head Diameter (Inches)	Frequency VPM	Amplitude (Inches)
General Construction	2 - 3-1/2	8000-12000	0.025-0.05

The frequency and amplitude shall be within the range indicated in the table above. The vibrator shall be inserted vertically at uniform spacing over the entire area of placement. The distance between insertions shall be approximately 1-1/2 times the radius of action of the vibrator. The vibrator shall penetrate rapidly to the bottom of the layer and at least 6 inches into the preceding layer if such exists. It shall be held stationary until the concrete is consolidated and then withdrawn slowly.

3.5 FINISHING

3.5.1 Unformed Surfaces

3.5.1.1 General

The ambient temperature of spaces adjacent to surfaces being finished shall be not less than 50 degrees F. All unformed surfaces that are not to be covered by additional concrete or backfill shall have a float finish, unless a steel trowel finish is specified, and shall be true to the elevations shown on the drawings. Surfaces to receive additional concrete or backfill shall be brought to elevation shown on the drawings and left true and regular. Exterior surfaces shall be sloped for drainage unless otherwise shown on the drawings or as directed. Joints shall be carefully made with a jointing or edging tool. The finished surfaces shall be protected from stains or abrasions.

3.5.1.2 Hot Weather

The ambient temperature of spaces adjacent to surfaces being finished shall not be less than 50 degrees F. In hot weather when the rate of evaporation of surface moisture, as determined by use of Figure 2.1.5 of ACI 305, may reasonably be expected to exceed 0.2 pounds per square foot per hour, provision for windbreaks, shading, fog spraying, or wet covering with a light colored material shall be made in advance of placement, and such protective measures shall be taken as quickly as finishing operations will allow.

3.5.1.3 Trowel Finish

A steel trowel finish shall be applied to the exposed surfaces of the tops of the caps. Concrete surfaces shall be finished with a float finish and after surface moisture has disappeared, the surface shall be steel-troweled to a smooth, even, dense finish free from blemishes including trowel marks. Tolerance shall be true planes within 1/8-inch in ten feet as determined by a 10-foot straightedge placed anywhere on the slab in any direction.

3.5.2 Formed Surfaces

3.5.2.1 General

Surfaces, unless other type of finish is specified, shall be left with the texture imparted by the forms except defective surfaces shall be repaired as described in 3.5.2.2 below. Unless painting of surfaces is required, uniform color shall be maintained by use of only one mixture without changes in materials or proportions for any structure or portion of structure which is exposed to view or on which a special finish is required. Forms shall not be reused if there is any evidence of surface wear or defects which would impair the quality of the surface.

3.5.2.2 Repair of Surface Defects

After form removal, all fins and loose materials shall be removed. All voids, and honeycombs exceeding 1/2 inch in diameter and all tie rod holes permanently exposed to view shall be reamed or chipped and filled with dry pack mortar. Defective areas larger than 36 square inches in any surface, permanently exposed or not, shall be delineated in a rectangular shape by a saw cut a minimum depth of 1-inch and repaired with concrete replacement. The cement used in the mortar or concrete for all surfaces permanently exposed to view shall be a blend of portland cement and white cement properly proportioned so that the final color when cured will be the same as adjacent concrete. Temperature of the concrete, ambient air, replacement concrete or mortar during remedial work including curing shall be above 50 degrees F. The prepared area shall be dampened, brush-coated with a neat cement grout or with an approved epoxy resin, and filled with mortar or concrete. The mortar shall consist of 1 part cement to 2-1/2 parts fine aggregate. The quantity of mixing water shall be the minimum necessary to obtain a uniform mixture and permit placing. Mortar shall be thoroughly compacted in place and struck off to adjacent concrete. Replacement concrete shall be drier than the usual mixture and thoroughly tamped into place and finished. Forms shall be used if required. Metal tools shall not be used to finish permanently exposed surfaces. The patched areas shall be cured for seven days.

3.6 CURING AND PROTECTION

3.6.1 General

All concrete shall be cured by an approved method for a period of 7 days. Immediately after placement, concrete shall be protected from premature drying, extremes in temperature, rapid temperature change, and mechanical injury. All materials and equipment needed for adequate curing and protection shall be available and at the placement site prior to start of concrete placement. Concrete shall be protected from the damaging effects of rain for 12 hours and flowing water for 14 days. No fire or excessive heat shall be permitted near or in direct contact with concrete at any time.

3.6.2 Moist Curing

Concrete moist-cured shall be maintained continuously (not periodically) wet for

the entire curing period. If water or curing materials used stain or discolor concrete surfaces which are to be permanently exposed, they shall be cleaned as required in 1.4.3 above. When wooden form sheathing is left in place during curing, the sheathing shall be kept wet at all times. Horizontal surfaces shall be cured by ponding, by covering with a minimum uniform thickness of 2 inches continuously saturated sand, or by covering with saturated non-staining burlap or cotton mats or sealed impervious sheet materials. Horizontal construction joints may be allowed to dry for 12 hours immediately prior to placing of the following lift.

3.6.3 Membrane Curing

3.6.3.1 With Curing Compound

Concrete may be cured with an approved curing compound in lieu of moist curing except that membrane curing will not be permitted on any surface containing protruding steel reinforcement.

3.6.3.2 Pigmented Curing Compound

A pigmented type curing compound conforming to CRD-C 300 may be used on surfaces which will not be exposed to view when the project is completed. A non-pigmented type curing compound, containing a fugitive dye, conforming to CRD-C 300 with the reflective requirements waived may be used on surfaces which will be exposed to view when the project is completed. In hot weather, concrete cured with the non-pigmented type shall be shaded from the direct rays of the sun for the first 3 days of the curing period.

3.6.3.3 To Formed Surfaces

The curing compound shall be applied to formed surfaces immediately after the forms are removed and all necessary repairs have been performed. Immediately after the removal of forms, all surfaces shall be kept continuously wet until repairs have been performed and curing compound applied. The surfaces shall be thoroughly moistened with water and the curing compound applied as soon as free water disappears. The curing compound shall be applied to unformed surfaces as soon as free water has disappeared. The curing compound shall be applied in a 2-coat continuous operation and at a uniform coverage of not more than 400 square feet per gallon for each coat. Concrete surfaces which have been subjected to rainfall within 3 hours after curing compound has been applied shall be resprayed by the method and at the coverage herein specified. All concrete surfaces on which the curing compound has been applied shall be adequately protected for the duration of the entire curing period from pedestrian and vehicular traffic and from any other cause which will disrupt the continuity of the curing membrane.

3.6.4 Impervious-Sheet Curing

Horizontal or near horizontal surfaces may be cured using impervious sheets. All surfaces shall be thoroughly wetted and be completely covered with waterproof paper, polyethylene film or with polyethylene-coated burlap having the burlap thoroughly water-saturated before placing. Covering shall be laid with light colored side up. Covering shall be lapped not less than 12 inches and securely weighted down or shall be lapped not less than 4 inches and taped to form a continuous cover with completely closed joints. The sheet shall be weighted to prevent displacement so that it remains in contact with the concrete during the specified length of curing. Coverings shall be folded down over exposed edges of slab and secured by approved means. Sheets shall be immediately repaired or replaced if tears or holes appear during the curing period.

3.6.5 Cold Weather

When the daily outdoor low temperature is less than 32 degrees F, the temperature of the concrete shall be maintained above 40 degrees F for at least the first three days and above 32 degrees F for the remainder of the required curing period. In addition, during the period of protection removal, the air temperature adjacent to the concrete surfaces shall be controlled so that concrete near the surface will not be subjected to a temperature differential of more than 25 degrees F as determined by observation of ambient and concrete temperatures indicated by suitable thermometers furnished by the Government as required and installed adjacent to the concrete surface and 2 inches inside the surface of the concrete. The installation of the thermometers shall be made by the Contractor at such locations as may be directed. Curing compounds shall not be used on concrete surfaces which are maintained at curing temperature by use of free steam.

--End of Section--

DIVISION 3 - CONCRETE

SECTION 03425

PRECAST CONCRETE

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SECTION 03425

PRECAST CONCRETE

PART 1 GENERAL

1.1 SCOPE

The work covered by this section consists of furnishing all equipment, materials, techniques and labor for and performing all work for precast concrete for the precast concrete deck units.

1.2 APPLICABLE PUBLICATIONS

The following publications of the issues listed below, but referred to elsewhere in this section by basic designation only, form a part of this specification to the extent indicated by the references thereto:

PRESTRESSED CONCRETE INSTITUTE (PCI).

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM).

C 39-96	Compressive Strength of Cylindrical Concrete Specimens
C 172-90	Sampling Freshly Mixed Concrete
C 192/C192M-95	Making and Curing Concrete Test Specimens in the Laboratory

1.3 DESIGN AND STRENGTH

The Contractor shall submit a concrete mix design for the precast concrete deck units to the Contracting Officer for informational purposes only. The minimum 28-day compressive strength for the concrete shall be 4,000 pounds per square inch. Neither calcium chloride nor any admixture containing calcium chloride shall be used in the precast concrete.

1.4 SUBMITTALS

Complete shop drawings for all precast concrete work shall be submitted to the Contracting Officer for approval in accordance with this paragraph, other paragraphs of the TECHNICAL SPECIFICATIONS and SECTION 1330 – SUBMITTAL PROCEDURES. The shop drawings shall show complete details including formwork, inserts, reinforcing steel, size and type of tensioning elements and anchorages, sequence of stressing, method of curing, quality of concrete, erection details and methods, and complete stressing calculations.

1.5 FORMWORK

Forms and formed surfaces shall conform to the drawings and to the applicable portions of SECTION 03100 - FORMWORK FOR CONCRETE.

1.6 DIMENSIONAL TOLERANCES

The applicable dimensional tolerances shall conform to the following table. Shop drawings must be approved by the Contracting Officer before any fabrication is begun. Unless otherwise shown on the contract drawings and/or specified elsewhere in these specifications, the following dimensional tolerances of members will govern:

(1)	Length of member	+0, -1/8 inch per feet
(2)	Width (Overall)	±1/4 inch
(3)	Depth (Overall)	±1/4 inch
(4)	Horizontal alignment (Deviation from a straight line parallel to centerline member)	1/4 inch max
(5)	Camber (Deviation from design camber at time of release)	1/8 inch per 10 feet of but not greater than 1/2 inch.
(6)	Camber (Differential between adjacent beams)	1/8 inch per 10 feet of span
(7)	Stirrup bars (Longitudinal spacing)	±1 inch
(8)	Tendon position	±1/4 inch center of gravity of strand group and individual tendons.
(9)	Position of lifting devices	±6 inches, longitudinal
(10)	Exposed beam ends (Deviation from square or designated skew)	Horizontal ±1/4 inch, Vertical ±1/8 inch per foot of beam height.
(11)	Bearing area (Deviation from plane)	±1/8 inch.

1.7 QUALITY CONTROL

The Contractor shall establish and maintain quality control for the work specified in this section to assure compliance with contract requirements and maintain records of his quality control for all construction operations including, but not limited to the following:

(1) Materials

Conform to the specifications and drawings.

(2) Construction

Conforms to the specifications and drawings.

(3) Submittals

Timely submission, review for accuracy.

A copy of these records and tests, as well as the records of corrective action taken, shall be furnished the Government.

PART 2 PRODUCTS

2.1 MATERIALS

Cement, concrete, reinforcing steels, and admixtures shall conform to the applicable requirements of related concrete sections, except as specified otherwise in this section or indicated on the drawings.

PART 3 EXECUTION

3.1 CONSTRUCTION

3.1.1 Marking

All precast units shall be plainly marked and identified for ready correlation with corresponding test specimens. Pickup points shall be plainly marked on all units. Concrete deck units shall be marked to show the number, size and location of reinforcement bars and to identify the top face and the position on the placement drawings. Concrete deck units designed specifically to be erected adjacent to other concrete deck units with which they are to function, shall be adequately match-marked before removal from the casting bed.

3.1.2 Erection

Points of support used in handling, transportation, storage and erection of concrete deck units shall be as close as practical to the final points of bearing. All erection details including shoring and bracing shall be clearly shown on the shop drawings. Extreme care shall be taken during storage, hoisting and handling to prevent cracking and damage. Concrete deck units damaged during handling, storage or erection shall be replaced by the Contractor at his expense.

3.2 CONCRETE SAMPLING AND TESTING

Precast concrete shall be sampled and tested in accordance with ASTM’s C 39, C 172, and C 192 and other provisions specified herein. It is the Contractor’s responsibility to make 3 test cylinders for each day’s placement. One cylinder shall be broken at 7 days and the other two broken at 28 days. It shall be the Contractor’s responsibility to test the cylinders when they have reached the specified age. All test cylinders shall be cured under the same conditions as the concrete contained in the structure being built. The Contractor shall submit, to the Contracting Officer, certified copies of test reports. All sampling and testing shall be done by and at the expense of the Contractor.

--End of Section--

DIVISION 3 - CONCRETE

SECTION 03430

PILING; CONCRETE, PRECAST, PRESTRESSED

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SECTION 03430

PILING; CONCRETE, PRECAST, PRESTRESSED

PART 1 GENERAL

1.1 SCOPE

The work covered by this section consists of furnishing all plant, equipment, labor, and materials and performing all operations in connection with the manufacture and installation of precast, prestressed concrete bearing piling in accordance with these specifications and applicable drawings.

1.2 QUALITY CONTROL

The Contractor shall establish and maintain quality control for the work specified in this section to assure compliance with contract requirements and maintain records of his quality control for all construction operations including, but not limited to the following:

(1) Materials

Review of submittals prior to submission, materials to conform to specifications.

(2) Placement

Location, alignment, tolerances.

(3) Driving

Hammer meets the specifications requirements, penetration, bearing.

A copy of these records and tests, as well as the records of corrective action taken, shall be furnished the Government.

1.3 TYPE AND PROPERTIES

1.3.1 Type

The precast, prestressed concrete piles shall be 14 inches square with minimum 28 days compressive strength (f'c) of 5000 psi and be controlled by the applicable data indicated on the drawings, and applicable submittals as specified in DIVISION 3 - CONCRETE.

1.3.2 Properties

All materials used for the manufacture of the piles shall meet the applicable requirements of DIVISION 3 - CONCRETE.

1.4 APPLICABLE PUBLICATION

The following publication of the issue listed below, but referred to thereafter by basic designation only, form a part of this specification to the extent indicated by the reference thereto:

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) STANDARD

A 82-95a Steel Wire, plain, for Concrete Reinforcement

PART 2 PRODUCTS

2.1 CONCRETE PILES

2.1.1 General

Except as otherwise specified herein, the piles shall be cast of concrete; controlled, made, placed, and cured in accordance with the applicable provisions of DIVISION 3 - CONCRETE.

2.1.2 Reinforcing

The reinforcing system shall be rigidly wired or fastened at all intersections and held to true position in the forms by approved devices or methods. The No. 5 gauge steel spiral reinforcement for the concrete piling shall conform to the requirements of ASTM A 82.

2.1.3 Forms

Forms shall be arranged to provide ample working room and easy access for carrying out all operations required for the proper placing, consolidation, and finishing of the concrete for the piles. The design of the forms shall be such that their removal can be accomplished without damage to the completed piles. Side forms shall remain in place at least 24 hours after concrete is placed.

2.1.4 Casting

Piles shall be cast on level, mortar-tight, platforms, constructed to prevent settlement during the casting and curing operations. Piling shall be cast in a horizontal position. Casting in tiers will not be permitted. Once casting is started it shall be carried on as a continuous operation until the pile is completed. All concrete shall be thoroughly consolidated by internally vibrating, spading and rodding during the placing operation and it shall be thoroughly worked around the reinforcement and into the corners of the forms. The intensity of vibration shall be sufficient to cause the concrete to flow and settle into place. Vibration shall be applied uniformly over the length of the pile and shall be of sufficient duration to insure thorough consolidation of the concrete. Spading and rodding during the placing operation shall supplement the vibration. Surfaces shall be free from detrimental porosity or honeycomb. Each pile shall be marked with the date of its casting and pickup points shall be marked on each pile. All markings shall be located on the end of the pile opposite the driving head. Concrete test cylinders will be taken during the time of casting and shall be tested in accordance with SECTION 03425, paragraph 3.2.

2.1.5 Curing

Concrete piles shall be cured by the proposed method submitted as specified in SECTION 03300, paragraph 3.6. Concrete test cylinders shall be cured at the same location, under identical conditions, and by the identical method used to cure the piles cast of the same concrete placements from which the samples were taken.

2.1.6 Storage and Handling

The methods used for storage and handling of the piles shall be such that the piling will not be subjected to overstress, spalling, or other injury. In general, piles shall be lifted by means of a suitable bridle or slings attached to the pile at the marked pickup points. Piles which are crushed or otherwise injured during curing, handling or driving shall be removed from the site of the work by the Contractor at no cost to the Government.

2.2 LENGTHS OF PILES

The minimum lengths of piles shall be as called for on the drawings. Actual length of piles shall be as determined by the Contracting Officer based upon paragraph 3.2.

PART 3 EXECUTION

3.1 PLACING

Piles shall be driven as accurately as practicable in the correct locations, true to line both laterally and longitudinally and to the vertical or batter lines, all as indicated on the drawings. A variation in alignment of not more than 1/4 inch per foot from the vertical or from the batter lines shown on the plans will be permitted, except that for pile bents the top of the completed pile shall be no more than 2 inches from the true position as shown on the plans. The correct relative position of group piles shall be maintained by the use of templates or by other approved means. Any pile driven out of correct location shall be pulled and redriven by the Contractor at no additional cost to the Government.

3.2 PILE DRIVING

3.2.1 General

A complete and accurate record of the driving of piles shall be compiled by the Contractor on LMM Form 601 for submission to the Contracting Officer. This record shall include pile dimensions and location, the number of blows required for each foot of penetration throughout the entire length of each pile and any other pertinent information requested by the Contracting Officer. Copies of LMM Form 601, Pile Driving Record, will be furnished to the Contractor upon request. No piles shall be driven until the excavation or fill in the area which piles are to occupy has been completed to the elevation of the grade indicated. No piles shall be driven within 100 feet of concrete less than 7 days old, unless so directed by the Contracting Officer. Piles shall be driven by an approved diesel hammer, steam hammer or air hammer of a size and type suitable for the work. Hammer shall be as approved by the Contracting Officer. The Contractor shall submit literature and catalogue cuts with pictures for hammer and cushion. The hammer shall develop an energy of not less than 15,000 foot-pounds. The hammer shall be operated at all times at the steam or air pressure and at the speed recommended by the manufacturer. Boiler or compressor capacity shall be sufficient to operate the hammer continuously at full rated speed. Piles shall be protected during driving by a cushion and cap of approved design. Pile drivers shall have firmly supported leads extending to the lowest point the hammer must reach to drive the piles to cut-off elevation without the use of a follower. A pile shall not be driven until it is approved for driving. Approval will be based upon the condition of curing and on its compressive strength as indicated by the test cylinders.

3.2.2 Driving

Each pile shall be driven continuously and without voluntary interruption until

the required depth of penetration and penetration rate per blow have been attained. The maximum blows per inch applied to the pile shall be dependent upon the type of hammer used and will be determined by the Contracting Officer. Deviation from this procedure will be permitted only in case the driving is stopped by causes which could not reasonably have been anticipated. A pile which cannot be driven to the required depth because of an underground obstruction shall be pulled and redriven if the obstruction can be removed or penetrated or the pile shall be cut off whichever is directed by the Contracting Officer. A pile which has not reached the required penetration rate per blow when the top has been driven to the cut-off elevation shall be built-up as directed and driven to a depth sufficient to develop the required penetration rate per blow. The penetration per blow which is used as an indication of the bearing capacity of the pile is dependent upon the type of driving equipment used and other factors and it will in every case be determined by the Contracting Officer. Water jets may be used to assist driving only when specifically authorized by the Contracting Officer and he may require their use where satisfactory driving is not obtained otherwise. Where jetting is authorized, the jetting equipment shall be of a type and capacity approved by the Contracting Officer. All jetted piles shall be seated by driving the pile a minimum of 2 feet after jetting. Piles which have uplifted after driving shall be redriven to grade after conclusion of other driving activity in that general area. Unless otherwise authorized all pile tops shall be driven to the cut-off elevations.

3.3 DAMAGED AND MISPLACED PILES

Any pile which is cracked or broken because of internal defects or by improper handling or driving, or which is otherwise injured so as to impair it for its intended use, or any pile driven out of proper location, shall be removed and replaced, or, at the option of the Contracting Officer, a second pile may be driven adjacent thereto. All work of removal and cost of replacement shall be borne by the Contractor at no additional expense to the Government. The Contracting Officer may require the Contractor to pull certain selected piles after driving for test and inspection to determine the condition of the piles. Any pile so pulled and found to be damaged to such extent as, in the opinion of the Contracting Officer, would impair its usefulness in the completed structure, shall be removed from the site of the work and the Contractor shall furnish and drive a new pile to replace the damaged pile. Piles pulled and found to be sound and in a satisfactory condition shall be redriven.

3.4 CUT-OFFS

When for any reason, a pile head can not been driven to the cut-off elevation, the pile shall be cut off perpendicular to the axis of the pile at the cut-off elevation; but, the Contractor must have prior approval from the Contracting Officer. Cutting methods shall be used which will not damage the portion of the pile to be left in place nor the pile reinforcement.

3.5 SPLICING

Upon approval of the Contracting Officer, the Contractor will be permitted to lengthen piles by splicing and when specified herein or directed by the Contracting Officer the Contractor shall be required to lengthen piles by splicing. The longitudinal reinforcing of the pile shall be exposed for a length equal to or greater than 24 inches. If necessary, the concrete shall be cut away to accomplish this. Bars of the size specified on the drawings and of sufficient length for the required extension shall be fastened to the exposed bars and transverse reinforcement as shown on the drawings for the pile head. Concrete cuts shall be made perpendicular to the axis of the pile and all concrete shall be removed 24 inches below ends of the exposed steel. Bars shall be lapped for

the full length of the bars exposed. When the reinforcing has been placed, the top of the pile shall be prepared for receiving concrete by cleaning with either wet sandblasting or high pressure water jet. The cleaning operation shall be performed as the final operation completed before placing and not more than two days prior to placing the following lift. The operation shall be continued until all accumulated laitance, coatings, stains, debris, and other foreign materials are removed. Concrete of the same quality as that used to cast the pile shall then be placed, finished and cured as specified for the original pile except that the forms shall remain in place for at least 72 hours after placing the concrete. Driving of a spliced pile shall not be resumed until it is approved for driving by the Contracting Officer.

--End of Section--

DIVISION 3 - CONCRETE

SECTION 03440

BRIDGE SUPERSTRUCTURE

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SECTION 03440

BRIDGE SUPERSTRUCTURE

PART 1 GENERAL

1.1 SCOPE

The work covered in this section consists of furnishing all shop drawings, plant, labor, equipment and materials, and performing all work in connection with the construction of the bridge superstructure as specified herein and/or shown on the drawings.

1.2 APPLICABLE PUBLICATIONS

The following publications of the issues listed below, but referred to thereafter by basic designation only, form a part of this specification to the extent indicated by the references thereto:

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) STANDARD

A 36/36M-96	Carbon Structural Steel
A 153/A153M-95	Zinc Coating (Hot-Dip) on Iron and Steel Hardware
A 307-94	Carbon Steel Bolts and Studs, 60,000 PSI Tensile Strength
D 224-89 (1996)	Smooth Surfaced Asphalt Roll Roofing (Organic Felt)
D 1751-83 (R 1991)	Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types)

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO).

Standard Specifications for Highway Bridges, Fifteenth Edition (1992)

M 213-81 (R 1990)	Preformed Expansion Joint Fillers for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types)

AMERICAN WELDING SOCIETY (AWS)

D1.1-94	Structural Welding Code Steel Thirteenth Edition

FEDERAL SPECIFICATIONS (FED. SPEC.)

MMM-A-001993	Adhesive, Epoxy, Flexible Filled (For Binding, Sealing, and Grouting)

ARKANSAS STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (1993 EDITION)

1.3 STORAGE OF MATERIALS

Materials, except precast concrete deck units, shall be stored at the site in weathertight enclosures, and shall be kept free from dirt, grease, and other foreign matter. Precast prestressed concrete girder units shall be stored as specified in SECTION 03230, paragraph 1.7.

1.4 SUBMITTALS

Shop drawings shall be submitted for approval in accordance with SECTION 1330 – SUBMITTAL PROCEDURES. Drawings shall include all shop and erection details, and members and connections for any portion of the structure not shown on the contract drawings shall be detailed by the fabricator and indicated on the shop drawings. All welds shall be indicated by standard welding symbols of the AWS.

1.5 QUALITY CONTROL

The Contractor shall establish and maintain quality control for the work specified in this section to assure compliance with contract requirements and maintain record of his quality control for all construction operations including but not limited to the following:

(1) Material

Suitability for use in the work, adherence to specification standards, review of certifications prior to submittal.

(2) Erection

Handling, positioning, dowel installation, construction tolerances.

(3) Shop Drawings and Submittals

Review of all submittals prior to installation.

A copy of these records and tests, as well as the records of corrective action taken, shall be furnished the government.

PART 2 PRODUCTS

2.1 MATERIALS

2.1.1 Concrete

Concrete shall meet the applicable provisions of DIVISION 3 - CONCRETE.

2.1.2 Non-Shrink Mortar

Non-shrink mortar shall be “Embeco T430-A Mortar” as manufactured by Chem Rex, Master Builders Company, Cleveland, Ohio, or approved equal.

2.1.3 Epoxy Grout

Epoxy grout shall conform to the requirements of Fed. Spec. MMM-A-001993, Type I.

2.1.4 Felt Joints and Bearing Pads

Felt joints and bearing pads shall consist of a roofing felt saturated and coated on both sides with asphalt, and coated on one side with powered mineral matter such as talc or mica.

2.1.5 Hardware

All hardware, except dowel pins, used in the construction of the bridge shall be galvanized to conform to the requirements of ASTM A 153, and all hardware shall be of the grade normally obtained commercially. Structural steel, plain washers, studs, transverse tie rods, and dowel pins shall conform to the requirements of ASTM A 36/36M. Bolts and nuts shall conform to the requirements of ASTM A 307, Grade A.

2.1.6 Joint Material and Filler

Joint material and filler shall be preformed expansion joint filler of non extruding and resilient bituminous types conforming to ASTM D 1751 or AASHTO M-213. Bituminous fiber material may be laminated with a maximum of 2 plys and a minimum ply thickness of 1/2 inch. Plys are to be joined by an epoxy bonding agent approved by the manufacturer. Panels shall not be placed on laminated bituminous fiber until the epoxy has had sufficient time to set according to the manufacturers recommendations.

2.1.7 Lifting Loops

Lifting loops shall conform to the requirements of the manufacturer.

2.1.8 Welding

Welding shall conform to the applicable provisions of AWS D1.1.

2.1.9 Submittals

Certificate of compliance will be required for materials specified in 2.1.2 through 2.1.8 above.

PART 3 EXECUTION

3.1 ERECTION

The superstructure shall be constructed to the finish lines and grades as shown on the drawings and in conformance with AASHTO. The erection of the deck unit and the installation of the materials specified in 2.1 above shall conform to the manufacturer's recommendations, contract drawings, and to the schedules and

drawings submitted in accordance with 1.4 above. During erection of the deck units, care shall be exercised to insure that the top of the bearing pads are free of foreign materials. Any shifting of units shall be done while the units are held free of the supports. After the deck units have been placed and fastened by transverse tie assemblies, dowel holes shall be thoroughly cleaned and the dowels set therein with epoxy grout or joint sealant as applicable. Placing of non-shrink mortar shall be carried continuously across longitudinal joints. The shear keys shall be thoroughly cleaned before the application of non-shrink mortar. The face edge of all joints which are exposed to view shall be carefully finished true to line and elevation.

--End of Section--

DIVISION 4 - MASONRY

(NOT USED)

DIVISION 5 - METALS

SECTION 05500

GUARDRAIL

TABLE OF CONTENTS

SECTION 05500

GUARDRAIL

PART 1 GENERAL

1.1 SCOPE

The work covered by this section consists of furnishing all plant, labor, materials, and equipment, and installing all structural steel items for the guardrail as specified herein and/or indicated on the drawings.

1.2 APPLICABLE PUBLICATIONS

The following publications of the issues listed below, but referred to thereafter by basic designation only, form a part of this specification to the extent indicated by the references thereto:

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) PUBLICATIONS.

A 36/A36M-96	Carbon Structural Steel
A 123-89a and Ed Cmt 1	Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
A 153/A153M-95	Zinc Coating (Hot-Dip) on Iron and Steel Hardware
A 307-94	Carbon Steel Bolts and Studs, 60,000 PSI Tensile Strength

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO).

Standard Specifications for Highway Bridges, Fifteenth Edition, 1992

M 180-89	Corrugated Sheet Steel Beams for Highway Guardrail

ARKANSAS STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (1993 EDITION).

1.3 STORAGE OF MATERIALS

Material shall be stored at the bridge site above the ground upon platforms, skids, or other supports. It shall be kept free from dirt, grease, and other foreign matter, and shall be protected as far as practicable from corrosion.

1.4 QUALITY CONTROL

The Contractor shall establish and maintain quality control for the work specified in this section to assure compliance with contract requirements and maintain records of his quality control for all construction operations including but not limited to the following:

(1) Materials

Conform to the specifications.

(2) Installation

Conforms to the specifications.

A copy of these records and tests, as well as the records of corrective action taken, shall be furnished the Government.

PART 2 PRODUCTS

2.1 GUARDRAIL

2.1.1 Structural Steel

All structural steel shall conform to the requirements of ASTM A 36.

2.1.2 Bolts, Nuts, and Washers

All bolts, nuts, and washers exclusive of anchor bolts shall conform to the requirements of ASTM A 307, Type 1 and shall be galvanized in accordance with ASTM A 153. All "Anchor"-bolts shall conform to ASTM A 36.

2.1.3 Bridge Guardrails and Posts

The posts, plates, channels, W rails, splice plates, and terminal sections of the guardrails shall be galvanized steel and structural shapes as indicated on the drawings. Steel for the post, plate, splice plate, and channel members shall meet the requirements of ASTM A 36 and shall be galvanized in accordance with ASTM A 123. The galvanized W rail sections including bolts shall conform to the requirements of AASHTO M 180, Class B, Type 1. The reflective washers for bridge guardrail shall be furnished by the Contractor. The Contractor shall submit a sample reflective washer that he intends to use, to the Contracting Officer for approval.

2.1.4 Certificates

Certificates of compliance will be required for all materials.

PART 3 EXECUTION

3.1 INSTALLATION

The structural steel portion of the bridge shall be installed as indicated on the drawings and/or as specified herein and in Section 712 of the Missouri Standard Specifications for Highway Construction.

--End of Section—

DIVISION 6 – WOODS AND PLASTICS

THRU

DIVISION 16 – ELECTRICAL

(NOT USED)